SHOUT
SHARE
IT

Bind from

Z5 71
S. 102

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

EDITED BY

DR. JEFFERY G. HARRISON

BRITISH MUSEUM
Z D
NATURAL HISTORY

Volume 79

1959

PRICE TWO SHILLINGS AND SIXPENCE

PREFACE

It is very gratifying that we have been able to produce a volume of 170 pages this year. This reflects the satisfactory flow of papers and the continued financial support. This year saw the increase in the subscription rate by 10/- to £1 10*s*. 0*d*., the first rise since well before the war, a remarkable record, and we are happy to report that in spite of this, the number of subscribers has continued to rise.

The response to the appeal to authors over the costs of their corrections has resulted in costs this year being £8 4*s*. 3*d*. as compared with £18 16*s*. 3*d*. last year. In addition to this, one author kindly paid for all of his, so the Club has effected a substantial saving, which it is hoped will be maintained.

Summaries of papers have continued to appear in *Biological Abstracts* and during the year we were asked to complete a form covering all aspects of the Bulletin for the U.S.S.R. Academy of Sciences, as the Institute is completing an Index of World Scientific Periodicals reviewed in their Abstracts Journal.

We were fortunate in surviving the printing dispute without any disruption in the appearances of the Bulletin and the fact that the September issue appeared on time reflects great credit on the management and staff of the Caxton Press. Again we are indebted to Mr. C. N. Walter for preparing the List of Authors etc., and I would like to thank Mrs. B. P. Hall, Dr. James Harrison, Captain C. R. S. Pitman and Mr. N. J. P. Wadley for their help.

The numbers attending the meetings in 1959 were as follows:—Members of the Club, 223; Members of the B.O.U., 32; Guests, 62; Guests of the Club, Mr. A. C. Townsend, Mr. H. J. de S. Disney, Mr. R. K. Murton, Dr. and Mrs. Cushman Murphy, Dr. R. A. Faller. Total: 322. In addition, the B.O.U. Centenary Banquet, which was held in place of the usual joint March meeting, was attended by over 200 member of the B.O.U. and guests at the Fishmongers Hall, London, on the 23rd March, 1959.

JEFFERY HARRISON.

Sevenoaks, December, 1959.

COMMITTEE 1959

Captain C. R. S. Pitman, *Chairman* (elected 1959).
Mrs. B. P. Hall, *Vice-Chairman* (elected 1959).
Dr. J. G. Harrison, *Editor* (elected 1952).
Mr. N. J. P. Wadley, *Secretary* (elected 1950).
Mr. C. N. Walter, *Hon. Treasurer* (elected 1950).
Miss T. Clay (elected 1956).
Mr. I. J. Ferguson-Lees (elected 1958).
Mr. P. A. D. Hollom (elected 1959).
Mr. R. S. R. Fitter (elected 1959).

OFFICERS OF THE BRITISH ORNITHOLOGISTS' CLUB PAST AND PRESENT

Chairmen

P. L. Sclater	1892–1913
Lord Rothschild	1913–1918
W. L. Sclater	1918–1924
H. F. Witherby	1924–1927
Dr. P. R. Lowe	1927–1930
Major S. S. Flower	1930–1932
D. A. Bannerman	1932–1935
G. M. Mathews	1935–1938
Dr. A. Landsborough Thomson	1938–1943
D. Seth-Smith	1943–1946
Dr. J. M. Harrison	1946–1949
Sir Philip Manson-Bahr	1949–1953
Colonel R. Meinertzhagen	1953–1956
C. W. Mackworth-Praed	1956–1959
Captain C. R. S. Pitman	1959–

Vice-Chairmen

Lord Rothschild	1930–1931
W. L. Sclater	1931–1932
H. F. Witherby	1932–1933
G. M. Mathews	1933–1934
N. B. Kinnear	1934–1935
H. Whistler	1935–1936

Vice-Chairmen—*cont.*

D. Seth-Smith	1936–1937
Colonel R. Sparrow	1937–1938
Dr. G. Carmichael Low	1938–1939
Hon. Guy Charteris	1938–1939
W. L. Sclater	1939–1940
Dr. D. A. Bannerman	1939–1940
Capt. C. H. B. Grant	1940–1943
B. W. Tucker	1940–1943
F. J. F. Barrington	1943–1945
Dr. E. Hopkinson	1943–1945
C. W. Mackworth-Praed	1945–1946
Dr. J. M. Harrison	1945–1946
Sir Philip Manson-Bahr	1946–1947
B. G. Harrison	1946–1947
Lt.-Colonel W. P. C. Tenison	1947–1948
Miss E. M. Godman	1947–1948
Colonel R. Meinertzhagen	1948–1949
Major A. G. L. Sladen	1948–1949
Colonel R. Meinertzhagen	1949–1953
Mr. E. M. Nicholson	1953–1956
Captain C. R. S. Pitman	1956–1959
Mrs. B. P. Hall	1959–

Editors

R. Bowdler Sharpe	1892–1904
W. R. Ogilvie-Grant	1904–1914
D. A. Bannerman	1914–1915
D. Seth-Smith	1915–1920
Dr. P. R. Lowe	1920–1925
N. B. Kinnear	1925–1930
Dr. G. Carmichael Low	1930–1935
Captain C. H. B. Grant	1935–1940
Dr. G. Carmichael Low	1940–1945
Lt.-Colonel W. P. C. Tenison	1945–1947
Captain C. H. B. Grant	1947–1952
Dr. J. G. Harrison	1952–

Honorary Secretaries and Treasurers

Howard Saunders	1892–1899
W. E. de Winton	1899–1904
H. F. Witherby	1904–1914
Dr. P. R. Lowe	1914–1915
C. G. Talbot-Ponsonby	1915–1918
D. A. Bannerman	1918–1919
Dr. Philip Gosse	1919–1920
J. L. Bonhote	1920–1922
C. W. Mackworth-Praed	1922–1923
Dr. G. Carmichael Low	1923–1929
C. W. Mackworth-Praed	1929–1935

Honorary Secretaries

Dr. A. Landsborough Thomson	1935–1938
C. R. Stonor	1938–1940
N. B. Kinnear	1940–1943
Dr. G. Carmichael Low	1943–1945
Lt.-Colonel W. P. C. Tenison	1945–1947
Captain C. H. B. Grant	1947
W. E. Glegg	1947–1949
Miss G. M. Rhodes	1949–1950
N. J. P. Wadley	1950–

Honorary Treasurers

C. W. Mackworth-Praed	1935–1936
Major A. G. L. Sladen	1936–1942
Miss E. P. Leach	1942–1949
C. N. Walter	1950–

LIST OF MEMBERS
(As at 31st October, 1959)

1930 ACLAND, Miss C. M., (*Committee*, 1951–1955); Grassholme, 2 Orchard Close, Banstead, Surrey.
1958 ADAMS, L. E. G., 15 Chertsey Street, Guildford, Surrey.
1912 ALEXANDER, H. G., 26 Bon Accord Road, Swanage, Dorset.
1957 ALLEN, J., Cleveland, Longfield Avenue, New Barn, Longfield, Dartford, Kent.
1959 ALLISON, F. R., P.O. Box 522, Addis Ababa, Ethiopia.
1948 ALLISON, S., 161 Harrington Drive, Nottingham.
1955 ALLOUSE, Bashir E., B.P.M.O. Director, Iraq Natural History Museum, Baghdad, Iraq.
1957 AMES, A. G. E., Two Glenowen, Lansdown Road, Cheltenham, Glos.
1952 ATKINSON-WILLES, G. L., The Wildfowl Trust, Slimbridge, Glos.
1957 AUTGAERDEN, Dr. S., 14 Place Dauphine, Paris 1, France.

1953 BAGNALL-OAKLEY, R. P., Brinton Hall, Melton Constable, Norfolk.
1948 BAK, F. A., 46 Holmfield Road, Leicester.
1910 BANNERMAN, D. A., M.B.E., M.A., Sc.D., F.R.S.E., F.Z.S., F.R.G.S., H.F.A.O.U., (*Editor*, 1914–1915; *Hon. Secretary*, 1918–1919; *Hon. Treasurer*, 1918–1919; *Committee*, 1922–1925; *Chairman*, 1932–1935; *Vice Chairman*, 1939–1940); Boreland of Southwick, by Dumfries.
1933 BARCLAY-SMITH, Miss I. P., (*Committee*, 1941–1944); 51 Warwick Avenue, London, W.9.
1957 BARLOW, C. S., 33 De Beer Street, Braamfontein, Johannesburg, S. Africa.
1951 BARLOW, Capt. T. E., R.N., Boswells, Wendover, Aylesbury, Bucks.
1935 BARNES, Mrs. E. C., Hungerdown, Seagry, Chippenham, Wilts.
1947 BELCHER, Sir Charles F., K.B.E., 850 Hope Street, Kokstad C.P., S. Africa.
1937 BENSON, C. W., B.A., Game Department, P.O. Box 1, Chilanga, Northern Rhodesia.
1948 BENSON, Miss S. V., (Mrs. Taylor); 26 Downsview, Bude, Cornwall.
1948 BEVEN, Dr. G., M.B., B.S., B.Sc., M.R.C.S., L.R.C.P., (*Committee*, 1954–1958); 16 Parkwood Avenue, Esher, Surrey.
1956 BILBY, H. A., 3 Barra Hall Road, Hayes, Middlesex.
1958 BOOTH, Captain B. D. McDonald, The Royal Scots Greys, Fresh Fields, Elsenham, Nr. Bishops Stortford, Herts.
1956 BOURNE, Dr. W. R. P., 46 Wilbury Road, Hove 3, Sussex.
1920 BOYD, A. W., M.C., Frandley House, Nr. Northwich, Cheshire.
1953 BOYES, Prof. J., F.R.C.S.(E), F.D.S.R.C.S.(Eng.), 12 Kingsburgh Road, Murrayfield, Edinburgh 12.
1953 BRADLEY, Mrs. J. D., 53 Osterley Road, Isleworth, Middlesex.
1957 BRIDGMAN, C. J., Kantara, 36 Esmead, Monkton Park, Chippenham, Wilts.
1952 BROMLEY, R., Glenroyd, 28 Woodthorne Road, Tettenhall, Staffs.
1956 BROOKE, Oliver, Chaigaik, P.O. Box 20, Kericho, Kenya, East Africa.
1958 BROOKE, R. K., Box 8016, Causeway, S. Rhodesia.
1957 BROUGH, J. B., 48 Greenleas Road, Wallasey, Cheshire.
1950 BROWNLOW, Lt. Col. H. G., R.E., Monomark BM/DIPPER, London, W.C.1.
1948 BRYSON, A. G. S., 48 Frogston Road West, Edinburgh 10.
1948 BUSHELL, D. C., Hurstbourne, Southwell Park Road, Camberley, Surrey.
1948 BUTTON, E. L., Boma, Lundazi, Northern Rhodesia.
1911 *BUXTON, Maj. A., D.S.O., D.L., Horsey Hall, Nr. Gt. Yarmouth, Norfolk.

1957 CAMPBELL, N. A., P.O. Box 2454, Salisbury, Southern Rhodesia.
1933 CAMPBELL, Dr. J. W., Ardrennich, Strathtay, Perthshire.
1958 CATCHESIDE, Bernard T., 142 Northcroft Road, London, W.13.
1936 CAVE, Rev. F. O., O.B.E., M.C., 19 Melton Court, London, S.W.7.
1946 CHADWYCK-HEALEY, Mrs. G. M., New Place, Porlock, Minehead, Somerset
1951 CHALIF, E. L., 37 Barnsdale Road, Shorthills, New Jersey, U.S.A.
1936 CHAPIN, Dr. J. P., Ph.D., American Museum of Natural History, Central Park West at 79th Street, New York 24, U.S.A.
1923 CHARTERIS, Hon. G. L., Old House, Didbrook, Nr. Cheltenham, Glos.
1938 CHISLETT, R., Brookside, Masham, Nr. Ripon, Yorks.

1938 CLANCEY, P. A., F.Z.S., Museum and Art Gallery, City Hall, Smith Street, Durban, Natal, South Africa.
1916 CLARKE, J. P., Broadhurst Manor, Horstead Keynes, Sussex.
1950 CLAY, Miss T., (*Committee*, 1956–); British Museum (Natural History), Cromwell Road, S.W.7.
1946 COHEN, E., F.Z.S., Hazelhurst, Sway, Hants.
1952 CONDER, P. J., 5 Bedales, Scaynes Hill, Nr. Haywards Heath, Sussex.
1948 COOMBES, R. A. H., British Museum (Natural History), The Zoological Museum, Tring, Herts.
1957 CORMACK, Robin S., Brockham Hill House, Willsbridge, Bristol.
1958 CUDWORTH, John, 17a Prospect Road, Ossett, Yorkshire.
1927 CUNNINGHAM, Capt. J., R.A., 3 Donegall Square East, Belfast, Northern Ireland.
1958 CURRY-LINDAHL, Kai, Nordiska Museet Skansen, Zoological Dept., Stockholm.
1957 da CUNHA, R., 8 Hylands Close, Epsom, Surrey.

1957 DEIGNAN, H. G., Associate Curator, Division of Birds, United States National Museum, Washington 25, D.C., U.S.A.
1920 DELACOUR, J., Los Angeles County Museum, Exposition Park, Los Angeles 7, California, U.S.A.
1952 DICKINSON, H. J., Selborne Cottage, Paston North Walsham, Norfolk.
1957 DILLINGHAM, I. H., Sunnyside, Stone Cross, Westham, Nr. Pevensey, Sussex.
1956 DISNEY, H. J. de S., Dept. of Agriculture, P.O. Box 73, Dodoma, Tanganyika Territory, East Africa.
1956 DORST, Dr. Jean, 28 Boulevard Pereire, Paris 17, France.
1958 DOYLE, Rev. F., African Missions, Blackrock Road, Cork, Ireland.
1942 DUFFIN, C. J., The Cottage, Lyncroft Gardens, Ewell, Surrey.
1928 DUNCAN, A. B., Lannhall, Tybron, Dumfriesshire.

1957 EDBERG, Ragnar, Olaigatan 11, Orebro, Sweden.
1952 EDWARDS, P, F.Z.S., The Rowans, The Avenue, Trimley St. Mary, Suffolk.
1953 ELLIOTT, H. F. I., O.B.E., 173 Woodstock Road, Oxford.
1952 ETCHECOPAR, R. D. (Mons.), 217 rue du Faubourg St. Honore, Paris 8, France.
1958 *EVANS, Mrs. R., 15 Westmorland Road, Maidenhead, Berks.

1959 FENNELL, C. M., 19291 Westover Road, Rocky River, Ohio, U.S.A.
1948 FERGUSON-LEES, I. J., (*Committee*, 1958–); 30 St. Leonard's Avenue, Bedford.
1927 FERRIER, Miss J. M., F.Z.S., Blakeney Downs, Blakeney, Norfolk.
1959 FINCHER, F., Randon Wood, Woodcote, Bromsgrove, Worcs.
1953 FINNIS, R. G., Helston, Nurstead Lane, Longfield Hill, Nr. Dartford, Kent.
1936 FISHER, J. M. M., (*Committee*, 1942–1946); The Old Rectory, Ashton, Northampton.
1943 FITTER, R. S. R., B.Sc., F.Z.S., (*Committee*, 1959–); Drifts, Chinnor Hill, Oxford.
1950 FORSTER, Miss E., The Double House, Wiveton, Holt, Norfolk.
1929 FOULKES-ROBERTS, Capt. P. R., M.C., Lamb Hill, Bride, Nr. Ramsey, Isle of Man.

1959 GALLAGHER, Major M. D., c/o Lloyds Bank Ltd., Cox's & King's Branch, 6 Pall Mall, S.W.1.
1933 GILBERT, Capt. H. A., Bishopstone, Bridge Sollars, Nr. Hereford.
1930 GLENISTER, A. G., C.B.E., F.Z.S., The Barn House, East Blatchington, Seaford, Sussex.
1946 GODMAN, Miss C. E., South Lodge, Horsham, Sussex.
1933 GODMAN, Miss E. M., (*Vice-Chairman*, 1947–1948); South Lodge, Horsham, Sussex.
1953 GORTON, E., 249 Wigan Road, Westhoughton, Nr. Bolton, Lancs.
1956 GRIMWOOD, I. R., P.O. Box 72, Lusaka, Rhodesia.
1946 GUDMUNDSSON, Dr. F., Museum of Natural History, P.O. Box 532, Reykjavik, Iceland.

1957 HALDANE, L. A., c/o Lloyds Bank Ltd., Sidney Street, Cambridge.
1948 HALL, Mrs. B. P., (*Committee*, 1955–1959, *Vice Chairman* 1959–); Three Ways, 18 Lynwood Road, Epsom.
1959 de HAMEL, Dr. F. A., 41 Elsworthy Road, London, N.W.3.
1956 HARLEY, B. H., Flat 13, 20 Bryanston Street, London, W.1.
1928 HARRISON, Sir Bernard G., F.R.A.S., F.R.G.S., F.Z.S., (*Committee*, 1940–1944; *Vice Chairman*, 1946–1947); 45 St. Martin's Lane, London, W.C.2.
1922 HARRISON, J. M., D.S.C., M.R.C.S., L.R.C.P., F.Z.S., (*Committee*, 1933–1936; *Vice Chairman*, 1945–1946; *Chairman*, 1946–1949); Bowerwood House, St. Botolph's Road, Sevenoaks, Kent.
1943 HARRISON, J. G., M.A., M.B., B.Chir., D.R.C.O.G., F.Z.S., (*Editor*, 1952–); "Merriewood", St. Botolph's Road, Sevenoaks, Kent.
1954 *HARRISON, Mrs. P. F., "Merriewood", St. Botolph's Road, Sevenoaks, Kent.
1953 HARWIN, Dr. R. M., P.O. Box 647, Gwelo, Southern Rhodesia.
1956 HAWES, C. H., 248, Hoylake Crescent, Ickenham, Middlesex.
1957 HAY, W., Makondi Water Corporation, P.O. Box 11, Newala, Southern Province, Tanganyika, East Africa.
1953 HAZELWOOD, A., Oak Mount, 44 Rigby Lane, Bradshaw, Bolton, Lancs.
1927 HEATH, R. E., Greenway Bank, Biddulph, Stoke-on-Trent, Staffs.
1952 *HERINGTON, S. D., 8 Eton Villas, London, S.W.3.
1959 HILL, Brigadier S. James L., 50 Thurloe Square, London, S.W.7.
1952 HOFFMANN, L., Tour du Valat, Par le Sambuc B.D.R.H., France.
1957 HOGG, P., 15 Vine Court Road, Sevenoaks, Kent.
1957 HOLLANDS, F. G., M.B., B.S., F.R.C.S., Red Ley, Quarndon, Derbys.
1933 HOLLOM, P. A. D., (*Committee*, 1938–1940, 1947–1949, 1959–); Branksome, Old Woking Road, Pyrford, Woking, Surrey.
1956 HOLME, H. C., 23 Marlborough Place, London, N.W.8.
1958 HOUSTON, William H., Drumornie, Brora, Sutherland, Scotland.
1951 HURCOMB, Lord, G.C.B., K.B.E., 47 Campden Hill Court, London, W.8.
1959 HUSAIN, K. Z., Dept. of Zoology & Comparative Anatomy, University Museum, Oxford.

1902 INGRAM, Capt. C., F.Z.S., The Grange, Benenden, Cranbrook, Kent.
1954 IRWIN, M. P. S., c/o Barclays Bank Ltd., 8th Avenue/Main Street, Bulawayo, Southern Rhodesia.

1956 JACOBS, T. C., 166 Edgwarebury Lane, Edgware, Middlesex.
1958 JANY, J. E., Chlumer Str. 4, Berlin-Lichterfelde/West, West Berlin, Germany.
1957 JERVIS READ, S. H., The British Embassy, Tehran, Iran.
1958 JOHNSON, F. E. B., Willow Close, Mill Lane, Hulcote, Bletchley, Bucks.
1958 JOHNSON, H. P. H., B.A., F.R.G.S., Knutsford, Oak End Way, West Byfleet, Surrey.
1931 JORDAN, Karl, Ph.D., F.R.S., F.R.E.S., F.Z.S., Zoological Museum, Tring, Herts.
1948 JUSTICE, J. R., Spinningdale, Sutherland.

1956 KASPARYAN, Dr. Aran, Yeni Tarlabasi, Cad. No. 19/2, Taksim, Istanbul, Turkey.
1957 KOBAYASHI, Keisuke, No. 2, 1-Chome, Shinohara - Kitamachi, Nada-Ku (Rokko), Kobe, Japan.

1956 LAMM, D. W., 3320 Reservoir Road, Washington, D.C., U.S.A.
1958 LATHBURY, Lt. Gen. Sir Gerald, K.C.B., D.S.O., M.B.E., Locks House, Nr. Wokingham, Berks.
1931 LEACH, Miss E. P., M.B.E., (*Committee*, 1937–1942; *Hon. Treasurer*, 1942–1949); 9 Cornwall Gardens, London, S.W.7.
1959 LEES-SMITH, D. T., 75 School Lane, Addlestone, Nr. Weybridge, Surrey.
1926 LEWIS, J. S., Longstock House, Stockbridge, Hants.
1957 LIVERSIDGE, R., Museum and Snake Park, 28 Bird Street, Port Elizabeth, S. Africa.
1957 LOKE WAN THO, (Mr.), Cathay Building, Singapore, 9.
1956 LOWE, Major P. Bruce, 28 Palace Road, East Molesey, Surrey.
1948 LOWE, Mrs. H. D., 2 Hugo House, 178 Sloane Street, London, S.W.1.
1957 de LUCCA, C., B.Sc., M.D., F.R.E.S., 10 Church Square, Gharghur, Malta.

1935 MACDONALD, J. D., B.Sc.(For), B.Sc., C.F.A.O.U., (*Committee*, 1946–1949); British Museum (Natural History), Cromwell Road, S.W.7.
1921 MACKENZIE, J. M. D., B.A., C.M.Z.S., "Greyfriars", Greyfriars Garden, St. Andrews, Scotland.
1917 MACKWORTH-PRAED, C. W., F.R.G.S., F.Z.S., (*Hon. Secretary*, 1922–1923 *and* 1929–1935; *Hon. Treasurer*, 1922–1923 *and* 1929–1936; *Committee*, 1936–1937; *Vice Chairman*, 1945–1946; *Chairman*, 1956–1959); "Castletop", Burley, Nr. Ringwood, Hants.
1934 MACPHERSON, D. W. K., P.O. Box 15, Namitete P.O., Nyasaland.
1953 *MANCE, H. S., Wychwood, Pembroke Road, Woking, Surrey.
1957 MANDAZEN, Dr. H. G. P., Sociedad de Ciencias Naturales, La Salle, Apartado 681, Caracas-Venezuela.
1935 MANSFIELD, The Right Hon. the Earl of, Scone Palace, Perth, Scotland.
1907 MANSON-BAHR, Sir Philip H., C.M.G., D.S.O., M.D., F.R.C.P., (*Committee*, 1930–1933; *Vice Chairman*, 1946–1947; *Chairman*, 1949–1953); 149 Harley Street, London, W.1.
1951 *MANSON-BAHR, Lady, The Old Cottage, Pootings, Nr. Edenbridge, Kent.
1957 MARCHANT, S., c/o I.P.C., P.O. Box 61, Baghdad, Iraq.
1933 MAVROGORDATO, J. G., C.M.G., (*Committee*, 1957–1959); South Manor, Tilshead, Wilts.
1956 MAXSE, Miss Violet, Hatchetts, Westburton, Pulborough, Sussex.
1929 MAYAUD, Noel, 80 rue du Ranelagh, Paris XVI, France.
1944 McCULLOCH, Lt. Col. G. K., F.Z.S., "Tringa", 5 Roy Road, Northwood, Middlesex.
1956 McGEOCH, J. A., B.D.S., Little Elm, Elm Close, Wells, Somerset.
1931 McKITTRICK, T. H., B.A., Slate Falls, R.D.2 Blairstown, New Jersey, U.S.A.
1929 McNEILE, Capt. J. H., (*Committee*, 1935–1938); 6 Cresswell Gardens, London, S.W.7.
1901 MEINERTZHAGEN, Col. R., C.B.E., D.S.O., F.Z.S., H.F.A.O.U., (*Vice Chairman*, 1949–1953; *Chairman*, 1953–1956); 17 Kensington Park Gardens, London, W.11.
1959 MITCHELL, Mrs. Osborne, c/o Canadian-Brazilian Services Ltd., 9/12 Cheapside, London, E.C.2.
1946 MONK, Dr. J. F., Little Stow, Goring-on-Thames, Oxon.
1949 MOORE, Capt. H. H. R., D.S.C., R.N., Milton Cottage, Church Street, Uckfield, Sussex.
1947 MORRISON, A. F., P.O. Box 523, Tanga, Tanganyika Territory, E. Africa.
1956 MOULD, Capt. A. M., Chimney House, Pikes Hey Road, Caldy, Cheshire.
1951 MOUNTFORT, G. R., F.Z.S., A.A.O.U., Down End, Woldingham, Surrey.

1954 NAUMBURG, W. W., 120 Broadway, New York 5, N.Y., U.S.A.
1956 NEVIN, W. S., "Oakbank", Hythe, Kent.
1934 NICHOLSON, E. M., C.B., (*Committee*, 1952; *Vice Chairman*, 1953–1956); 13 Upper Cheyne Row, London, S.W.3.
1936 NORTH, M. E. W., c/o Secretariat, Nairobi, Kenya Colony.

1957 OATLEY, T. B., P.O. Box 25, Mtubatuba, Zululand, South Africa
1957 OWRE, Oscar T., University of Miami, Coral Gables 46, Florida, U.S.A.

1957 PALMER, Dr. Ralph S., New York State Museum, State Education Building, Albany 1, New York, U.S.A.
1945 PARRINDER, E. R., 91 Weald Road, Sevenoaks, Kent.
1957 PARSONS, C. H. F., 37 Court Farm Road, Northolt, Greenford, Middlesex.
1932 PAULSON-ELLIS, C. W. G., (*Committee*, 1944–1947); The Moat House, Melbourn, Royston, Herts.
1957 PAYNTER, R. A. Jnr., Museum of Comparative Zoology, Harvard College, Cambridge 38, Massachusetts, U.S.A.
1932 PEALL, Mrs. D., Hatfield Farm, Oare, Marlborough, Wilts.
1933 PEASE, H. J. R., (*Committee*, 1939–1942); The Savile Club, 69 Brook Street, London, W.1.
1959 PENNIE, Dr. Ian D., The Hollies, Golspie, Sutherland.
1953 PHELPS, W. H. Jnr., Apartado 2009, Caracas, Venezuela, South America.

1957 PHILIPS, A. R., a/c Prof. Bernardo Villa R., Privada de San Lucas No. 9, Coyoacán 21, D. F., Mexico.
1938 PHILLIPS, Mrs. C. P. R., Oxford House, Little Waltham, Chelmsford, Essex
1957 PHILLIPS, Major W. W. A., ''Storth'', Manor Way, Aldwick Bay, Bognor Regis, Susesx.
1948 PICKFORD, K. D., c/o Messrs. Pickford & Son, Portland Street, Gloucester.
1919 PITMAN, Capt. C. R. S., C.B.E., D.S.O., M.C., (*Committee*, 1953–1956; *Vice Chairman*, 1956–1959; *Chairman*, 1959–); Flat 9, 12, Chelsea Embankment, London, S.W.3.
1947 PLOWDEN-WARDLAW, W. J., 36 Ullswater Crescent, Kingston Vale, London, S.W.15.
1950 POOLE, J., ''Sweetcroft'', Benllech, Anglesey.
1944 PRESTWICH, A. A., F.Z.S., F.R.H.S., 61 Chase Road, Oakwood, N.14.
1957 PRIGOGINE, Alexandre, 45 Rue du President, Brussels, Belgium.

1957 RANKIN, Dr. M. N., M.B., ''Craigmillar'', Hemsworth, Nr. Pontefract, Yorks.
1956 REAY, W. H., Sgts. Mess, Royal Air Force, Turnhouse, Edinburgh.
1933 RHODES, Miss G. M., (*Committee*, 1945–1948; *Hon. Secretary*, 1949–50); Hildersham Hall, Cambridge.
1949 RICHARDS, Dr. W. A., M.B., B.S., F.R.C.S., ''Greenoge'', 40 Swakeleys Road, Ickenham, Uxbridge, Middlesex.
1951 RICHARDS, Hon. Mrs. Noel, M.D., 40 Swakeleys Road, Ickenham, Uxbridge, Middlesex.
1945 ROBERTS, Dr. B. B., 9 Pelham Court, 145 Fulham Road, London, S.W.3.
1959 ROLLIN, Noble, World Bird Research Station, Glanton, Northumberland.
1953 ROOKE, K. B., M.B., B.Ch.(Cantab.), Cranborne, Nr. Wimborne, Dorset.
1948 RUSSELL, Lord Hugh, ''Crownholt'', Woburn, Bletchley, Bucks.
1950 RUSSELL, J. A. S., Furze Hall, Fryerning, Nr. Ingatestone, Essex.

1954 SAGE, B. L., F.R.E.S., ''Caldey'', 11 Deepdene, Potters Bar, Middlesex.
1932 SCHAUENSEE, R. M. de, Devon, Pennsylvania, U.S.A.
1936 SCHOUTENDEN, Prof. Dr. H., Musée due Congo Belge, Tervueren, Belgium.
1954 SCHUZ, Prof. Dr. Ernst, Schloss Möggingen, über Radolfzell (Bodensee), Germany.
1946 SCOTT, P. M., C.B.E., D.S.C., M.A., F.Z.S., New Grounds, Slimbridge, Glos.
1952 SEARIGHT, R. G., 129 Oakwood Court, Kensington, London, W.14.
1945 SERLE, Dr. W., O.B.E., M.B., Ch.B., The Manse, Drumoak, Aberdeenshire, Scotland.
1902 SETH-SMITH, D., F.Z.S., (*Committee*, 1905–1912; *Editor*, 1915–1920; *Vice Chairman*, 1936–1937; *Chairman*, 1943–1946); 3 St. Omer Road, Guildford, Surrey.
1953 SHACKLETON, K. H., 175 Piccadilly, London, W.1.
1936 SHERRIFF, A., F.Z.S., Ranulf Road, Hampstead, London, N.W.2.
1959 SIBLEY, Charles G., Professor of Zoology, Edward Grey Institute, Botanic Garden, Oxford.
1954 SIMMS, E., 85 Brook Road, Cricklewood, N.W.2.
1919 SLADEN, Major A. G., M.C., (*Committee*, 1921–1924; *Hon. Treasurer*, 1936–1942; *Vice Chairman*, 1948–1949); Crabtree, Furlong, Haddenham, Aylesbury, Bucks.
1957 SMITH, K. D., 18 Stanhope Road, Weston-super-mare, Somerset.
1948 SMITHERS, R. H. N., B.Sc., National Museum of Southern Rhodesia, P.O. Box 240, Bulawayo, Southern Rhodesia.
1957 STAFFORD, J., ''Westering'', Moor Lane, Brighstone, Isle of Wight.
1959 START, J. M., Kivulini Ltd., Kivulini, Molo, Kenya, East Africa.
1957 STEIN, Prof. Robert C., Ursinus College, Dept. of Biology, Collegeville, P.A., U.S.A.
1925 STEVENS, H., Clovelly, 4 Beaconsfield Road, Tring, Herts.
1936 STEVENS, N., Walcot Hall, Lydbury, North Salop.
1953 SUMMERS, G. L. S., West Bank, Sutton Valence, Kent.
1949 SWYNNERTON, G. H., Game Dept., P.O. Box 397, Arusha, Tanganyika.

1956 TATE, Peter, Half Acre, Rooks Hill, Rickmansworth, Herts.

1927 THOMSON, Sir (Arthur) Landsborough, C.B., O.B.E., D.Sc., F.R.S.E., (*Committee*, 1930–1933; *Hon. Secretary*, 1935–1938; *Chairman*, 1938–1943); 42 Girdwood Road, Southfields, London, S.W.18.
1956 THORPE, Dr. W. H., 9 Wilberforce Road, Cambridge.
1897 TICEHURST, N. F., O.B.E., M.B., F.R.C.S., F.Z.S., (*Committee*, 1912–1914); Spots House, Small Hythe, Tenterton, Kent.
1956 TOWILL, Lt. Col. F. H., Urchinwood Manor, Congresbury, Somerset.
1959 TRAYLOR, Melvin A., Associate Curator, Division of Birds, Chicago Natural History Museum, Chicago 5, Illinois, U.S.A.
1947 TROTT, A. C., C.M.G., O.B.E., 33 Portmore Park Road, Weybridge, Surrey.
1925 TURTLE, L. J., 17–21 Castle Place, Belfast, Northern Ireland.

1948 UPTON, Mrs. R., Park Lodge, Margaretting, Essex.
1930 URQUHART, Capt. A., D.S.O., Latimer Cottage, Latimer, Chesham, Bucks.

1959 VAN CLEVE, G. Bernard, 323 S. Fairmount St., Pittsburgh 32, Pa., U.S.A.
1959 VAN OOSTEN, Jan Roger, 3010 North 14th, Tacoma, Washington, U.S.A.
1946 VAN SOMEREN, G. R. C., F.R.E.S., P.O. Box 1682 Nairobi, Kenya Colony, East Africa.
1920 VAN SOMEREN, Dr. V. G. L., The Sanctuary, Ngong, (P.O. Box 24947 Karen), Kenya Colony, East Africa.
1957 de VILLIERS, J. S., Apt. 6, 1540 McGregor Street, Montreal, Canada.
1934 VINCENT, J., M.B.E., Firle, Mooi River, Natal, South Africa.
1956 VINE, A. E., 101 Victoria Street, Littleport, Ely, Cambs.

1948 WADLEY, N. J. P., (*Hon. Secretary*, 1950–); 14 Elm Place, London, S.W.7.
1951 *WADLEY, Mrs. N. J. P., 14 Elm Place, London, S.W.7.
1948 WAGSTAFFE, R., City of Liverpool Public Museums, Carnatic Hall, Elmswood Road, Liverpool, 18.
1951 WAINWRIGHT, Maj. Gen. C. B., C.B., (*Committee*, 1953–1957); Hill Farm, Malting Green, Layer-de-la-Haye, Colchester, Essex.
1946 WALTER, C. N., F.C.A., (*Hon. Treasurer*, 1950–); 32 Stanley Avenue, Beckenham, Kent.
1952 WALTER, Mrs. V., 32 Stanley Avenue, Beckenham, Kent.
1934 WATT, Mrs. H. Boyd, F.Z.S., (*Committee*, 1942–1945); San Simeon, 52 Wimborne Road, Bournemouth, Hants.
1956 WAYRE, P. L., Reynolds Farm, Great Witchingham, Norwich, Norfolk.
1953 *WHITAKER, A. R., Flat 4, 35, Eton Avenue, London, N.W.3
1935 WHITE, C. M. N., 29 Albany Road, Ansdell, Lytham St. Annes, Lancs.
1950 WILKINS, G. T., Burnley Hall, E. Somerton, Gt. Yarmouth, Norfolk.
1946 WILLIAMS, A., 27 Southampton Street, London, W.C.2.
1951 WILLIAMS, J. G., Coryndon Museum, P.O. Box 658, Nairobi, Kenya Colony.
1959 WILLIAMS, Nigel, ''Harvey Hill'', P.O. Kabete, Kenya, East Africa.
1955 WINTERBOTTOM, J. M., P.O. Box 1616, Cape Town, South Africa.
1924 WORMS, C. de, Three Oaks, Shores Road, Horsell, Woking, Surrey.
1959 WORRIN, Major C., T.D., Grove Orchard, Tonbridge, Kent.
1946 *WYNNE, Col. O. E., O.B.E., F.R.G.S., (*Committee*, 1950–1953); Court Wood, Sandleheath, Fordingbridge, Hants.
1956 WYNNE, R. O., Court Wood, Sandleheath, Fordingbridge, Hants.

1956 YEALLAND, J. J., 56 Charlbert Court, London, N.W.8.

* denotes Honorary Members

LIST OF SUBSCRIBERS
(As at 31st October, 1959)

AFRICA

Transvaal Museum, Pretoria.
McLachlan, G. R., 28 Bird Street, Port Elizabeth.
Vesey-Fitzgerald, D., I.R.L.C.S., Abercorn, Northern Rhodesia.
Hoesch, Walter, P.O. Box 110, Okahandja.
Museu Dr. Alvaro de Castro, Lourenço Marques, Mozambique.
City Stores Dept., Durban, Natal.

Pinto-Lopes, Prof. Dr. J., The Director of the Scientific Research of Mozambique, Lourenço Marques, Mozambique.
Markus, Miles, 206 Lunnon Road, Hillcrest, Pretoria.

AUSTRALIA

Australian Museum, Sydney.
National Museum of Victoria, Russell Street, Melbourne.
Public Library of Victoria, Melbourne.
Commonwealth National Library, Canberra.

AUSTRIA

Gerold & Co., Booksellers, Wien.

BELGIUM

L'Office International de Librairie, S.P.R.L., Brussels.
Librairie Falk Fils, Brussels.

BRITISH ISLES

E. G. Allen & Sons, 12/14 Grape Street, W.C.1.
British Museum of Natural History, Cromwell Road, S.W.7.
The University, Bristol.
The Reference Library, Birmingham, 2.
Library Accessions Dept., Science Museum, S.W.7.
Mitchell Library, North Street, Glasgow, C.3.
Molineux, W. G. K., The Cottage, Isfield, Uckfield, Sussex.
National Library of Wales, Aberystwyth.
Royal Scottish Museum, Chambers Street, Edinburgh.
Zoological Society of London, Regents Park, N. W.1.
Zoological Museum, Tring, Herts.
Public Library, Museum and Art Gallery, Carlisle.
Smith, R. G., 16 Walton Gardens, Shenfield, Essex.
Hirst, J. L., 11 Princess Crescent, Bare, Morecambe, Lancs.
Blair, Dr. H. M. S., M.B., B.Sc., Bonnie Rigg, 5 St. George's Avenue, South Shields, Durham.
Gillham, Eric, 1a, Lancing Road, Orpington, Kent.
Goodwin, Derek, British Museum (Natural History), Cromwell Road, S.W.7.

CANADA

National Museum of Canada, Ottawa 4.
The McGill University, Montreal.

CHINA

Guozi Shudian, Peking.
Institute of Zoology, Academic Sinica, Peking.
The Library of Lanchow University, Lanchow.
Institute of Scientific Information, Academia Sinica, Peking.
Vu Dinh, So Xuat nhap khau sach bao, 19 Tran quoc Toan, Hanoi/north, Vietnam.

FRANCE

Laboratoire de Zoologie, Museum D'Historie Naturelle, Paris 5e.

GERMANY

Akademische Buchhandlung, Otto Rasch, Marburgh/Lahn.
Makatsch, Dr., Bautzen am, Martin-Hoop-Strasse 31.

Wolters, H. E., Nicolaus-Becker-Str 28, (22c) Geilenkirchen bei Aachen.
Prof. von Jordans, Museums Alexander Köenig, Bonn.
Zoologische Sammlung des Bayerischen Staates, München 19.

HOLLAND

Rijksmuseum van Natuurlijke Historie, Leiden.
Universiteits Bibliotheek, Singel 421, Amsterdam-C.

HUNGARY

Keve, Dr. A., Magyar Madartani Intezet, Budapest-Varosliget, Mezogazdasagi Museum.

INDIA

Zoological Survey of India, Calcutta 12.
Bombay Natural History Society, Fort Bombay.

ITALY

Museum Civico di Storia Naturale, Milano.
Libreria Zanichelli, (p. Lab. di Zoologia appl. alla Caccia), Bologna.
Nardinocchi, Gabrielle, Corso Mazzini 37, Ascoli Piceno.
Museo Civico di Storia Naturale, Bergamo.

NEW ZEALAND

Dominion Museum, Wellingtom.
O'Callaghan, T. C., c/o The Wakelys, C.P.O. Box 2656 ,Auckland, C.1.

NORWAY

Universitatsbiblioteket, Bergen.
Stavanger Museum, Stavanger.

POLAND

P.K.W.Z. ''Ruch'', Warszawa, Aleje Jerozolimskie No. 119.

PORTUGAL

Biblioteca da Faculdade de Ciencias, Lisbon.

SWEDEN

University Library, Lund.
Vetenskapsakademiens Bibliothek, Stockholm 50.
Rudebeck, Dr. G., Naturhist Riksmuseum, Stockholm 50.

U.S.A.

College of Agriculture, Albert R. Mann Library, Ithaca, New York.
Californian Academy of Sciences, San Francisco.
Cambridge Museum of Comparative Zoology, Cambridge, Massachusetts.
Carnegie Museum, Pittsburgh Pa.
Chicago Natural History Museum, Chicago 5.
Fish & Wildlife Service, Patuxent Research Refuge, Laurel, Maryland.
Univeristy of Michigan, Ann Arbor, Michigan.
Ohio State University, Columbus, Ohio.
American Museum of Natural History, 77th Street & 8th Avenue, New York.

University of Illinois, Urbana, Illinois.
Smithsonian Institution, Washington 25, D.C.
University of California, Berkeley 4, California.
University of Florida, Gainseville, Florida.
University of California at Los Angeles, Los Angeles 24, California.
University of Wisconsin, Madison 6, Wisconsin.
University of Tennessee, Tennessee.
University of Kansas Library, Lawrence, Kansas.
University of Utah Library, Salt Lake City 1, Utah.
Vaurie, Dr. Charles, American Museum of Natural History, New York 24.
Louisiana State University, Baton Rouge 3, La.
Linda Hall Library, 5109 Cherry, Kansas City 4, MO.
The Rice Institute Library, Houston 1, Texas.
University of Minnesota, Minneapolis 14, Minnesota.
Moore Laboratory of Zoology, Occidental College, Los Angeles 41, California.

U.S.S.R.

Filial Biblioteki, Akademii Nauk U.S.S.R., Moscow 57.
Biblioteka, Akademii Nauk, Tallyn.

NEW FORMS, 1959

Page
Anthoscopus minutus gigi 152
Eremopterix leucotis hoeschi 52
Mirafra africana bamendae 2
Ploceus cucullatus paroptus 41

LIST OF AUTHORS, ETC.

ACCOUNTS, FINANCIAL 66

ANNUAL GENERAL MEETING 69

ASH, DR. J. S.
  An aberrant Red-legged Partridge from Gloucestershire 129

BENSON, C. W.
  The Dusky Lark *Mirafra nigricans* (Sundevall) 124

BENSON, C. W. and PITMAN, Capt. Charles R. S.
  Further Breeding Records from Northern Rhodesia
    Part II 14
    Part III 18

B.O.U. Centenary 37

CLANCEY, P. A.
  On the Race of Cattle Egret *Ardeola ibis* (Linnaeus) occurring in the Ethiopian Zoogeographical Region 13
  A New Race of the Weaver *Ploceus cucullatus* (Müller) from East Africa 41
  The South African Races of the Cape Batis *Batis capensis* (Linnaeus) ... 57
  The Races of the Robin-Chat *Cossypha natalensis* Smith 60
  The South African Races of the Golden-tailed Woodpecker *Campethera abingoni* (Smith) 70
  Notes on some Grey-headed Sparrows from Kenya Colony 131
  Geographical Variation in the South African Populations of the Red-Eyed Bulbul *Pycnonotus nigricans* (Vieillot) 166

Coles, C. L.
History and Principles of Game Conservation 129

Controversial Discussion
Do Nesting Birds need protection from Egg Collectors, Ringers, Photographers and Bird Watchers? Do the contributions to science of these enthusiasts justify the disturbance they cause? 1

Disney, H. J. de S.
Work on *Quelea quelea* in Tanganyika 37

Finnis, R. G.
Aberrant Juvenile Blackbird *Turdus merula merula* Linneaus 152

Fitter, R. S. R.
The Status of the Great Black Woodpecker in the British Isles
Part I 79
Part II 102
Part III 109

Gillham, E. H.
Variations of plumage colourations in the Pochard *Aythya ferina* (Linnaeus) and the Tufted Duck *Aythya fuligula* (Linnaeus) 87
A Female Pochard, *Aythya ferina* (Linnaeus) with a Deformed Skull ... 100

Goodwin, Derek
Some Colour Varieties of Wild Pigeons 3
The Validity of the Genus *Megaloprepia* Reichenbach 52

Hall, Mrs. B. P.
A further Note on Variation in *Cossypha natalensis* 102
The Plain-backed Pipits of Angola 113

Hall, Mrs. B. P. and Traylor, Melvin A.
The Systematics of the African Grey Tits, *Parus afer* and *Parus griseiventris* 42

Harrison, Dr. James M.
Notes on a Collection of Birds made in Iraq by Flight Lieutenant David L. Harrison:—
Part I 9
Part II 31
Part III 49
Analogous Variation in Mallard and its possible Significance 22
Comments on a Wigeon X Northern Shoveler Hybrid 142

Harrison, Dr. James M. and Harrison Dr. Jeffery G.
Further Remarks on the White Neck-Spot Variant in the European Green-winged Teal 25
Plumage Variants in Drake Gadwall 78
Evolutionary Significance of Certain Plumage Sequences in Northern Shoveler 135

Harrison, Dr. Jeffery G.
Congenital "spoon-billed" deformities in Cinnamon Teal 27
See Harrison, Dr. James M.

Harrison, Dr. Jeffery G. and Hay, Dr. Hugh
Loss of Toes in a Moorhen due to Tuberculosis 28

Hay, Dr. Hugh
See Harrison, Dr. Jeffery G.

Husain, K. Z.
Is *Psittacula intermedia* (Rothschild) a Valid Species 89

IRWIN, Michael P. Stuart
  The Specific Relationship of *Parus afer* and *Parus griseiventris* ... 46
  Some Remarks on *Prinia flavicans* and its Allies ... 127

MOREAU, R. E.
  Notes on *Ploceinae*
    Part I ... 117
    Part II ... 159

MURTON, R. K.
  Wood Pigeon Movements and Migration ... 70

PHILLIPS, Major W. W. A.
  Note on the Occurrence of Bulwer's Petrel (*Bulweria bulwerii*) in the Indian Ocean ... 100

PITMAN, Capt. Charles R. S.
  See BENSON, C. W.

REPORT OF THE COMMITTEE ... 68

ROLLIN, Noble
  White Plumage in Blackbirds ... 92

SAGE, Bryan L.
  Additional data on a rare colour aberration in certain species of the genus *Larus* Linnaeus ... 29
  Some Comments on Autumn Migration in Eastern Iraq ... 132
  Exhibition of Hybrid Duck ... 153

SERLE, Dr. William
  Exhibition of an aberrant Yellow Wagtail, *Motacilla flava flava* Linnaeus obtained in British Cameroons ... 2
  A new race of *Mirafra africana* Smith from British Cameroons ... 2
  The West African races of the Lemon-Dove *Aplopelia larvata* (Temm. and Knip) ... 38
  Note on the Immature Plumage of the Honey-Guide *Melignomon zenkeri* Reichenow ... 65

SIBLEY, Dr. Charles G.
  Hybridization in Birds: Taxonomic and Evolutionary Implications ... 154

TOWNSEND, A. C.
  Early Drawings and Paintings of Natural History ... 17

TRAYLOR, Melvin A.
  See HALL, Mrs. B. P.

WAINWRIGHT, Major General C. B.
  Tuberculosis in a Wigeon ... 151

WHITE, C. M. N.
  A new Finch Lark from South West Africa ... 51
  Nomadism, Breeding and Subspeciation in some African Larks ... 53
  The Limits of the Genus *Mirafra* ... 163

WINTERBOTTOM, Dr. J. M.
  Review of the Races of the Cape Wagtail, *Motacilla capensis* L. ... 96
  The Races of *Euplectes capensis* (L) in the Cape Province ... 98
  A new subspecies of *Anthoscopus minutus* (Shaw & Nodder) from Cape Province ... 152

WILLIAMS, John G.
  Melaenornis ardesiaca in East Africa ... 51
  On the Status of the Northern Rhodesian Population of *Cyanomitra batesi* 101

BRITISH ORNITHOLOGISTS' CLUB

(Founded 5th October, 1892)

TITLE AND OBJECTS

The objects of the Club, which shall be called the "British Ornithologists' Club", are the promotion of scientific discussion between Members of the British Ornithologists' Union and others interested in ornithology, and to facilitate the publication of scientific information connected with ornithology.

RULES

(As amended, 18th February, 1958)

MANAGEMENT

(1) The affairs of the Club shall be managed by a Committee, to consist of a Chairman to be elected for three years, and who shall at the end of that period not be eligible for re-election for the next term; one Vice-Chairman, who shall serve for three years and who shall at the end of that period not be eligible for re-election for the next term; an Editor of the *Bulletin* to be elected for five years, and who shall at the end of that period not be eligible for re-election for the next term; a Secretary and a Treasurer who shall be elected for a term of one year, but who shall be eligible for re-election at the next term. There shall be, in addition, four other Members, the senior of whom shall retire each year, the vacancy being filled by the election of another Member. Officers and Members of the Committee shall be elected by the Members of the Club at an Annual General Meeting, and the names of such Officers and Members of the Committee nominated by the Committee for the ensuing year shall be circulated with the notice convening the Annual General Meeting at least two weeks before the Meeting. Should any Member wish to propose another candidate, the nomination of such, signed by at least two Members, must reach the Secretary at least one clear week before the Annual General Meeting.

(2) Any Member desiring to make a complaint of the manner in which the affairs of the Club are conducted must communicate in writing with the Chairman, who will, if it is considered necessary, call a Committee Meeting to deal with the matter.

(3) If the conduct of any Member or Associate-Member, hereinafter together described as Members, shall be deemed by the Committee to be prejudicial to the interests of the Club, that Member may be requested by the Committee to withdraw from the Club. In the case of a refusal, the Member's name may be removed from the list of Members at an Annual General Meeting, provided that, in the notice calling the meeting, intimation of the proposed resolution to remove the Member's name shall have been given to that Member, and a majority of the Members present shall record their votes for such removal.

SUBSCRIPTIONS

(4) Any Member of the British Ornithologists' Union may become a Member of the Club on payment to the Treasurer of an entrance fee of One Pound and a subscription of One Guinea for the current year. Those who are not Members of the British Ornithologists' Union may be admitted to the Club and shall be known as Associate Members. Applications for Associate Membership must be supported in writing by two Members (not being Associate Members), one on personal knowledge, and Associate Members shall be elected by the Committee. The conditions of Associate Membership as to entrance fee, subscription, and otherwise, shall be the same as for Members, save that Associate Members shall not be entitled to vote at any General Meeting or other meetings of the Club attended by them, nor be entitled to serve on the Committee, nor receive gratis a copy of the *Bulletin* of the Club. On signifying their desire, however, to the Editor they will be provided with one copy of the *Bulletin* reporting the proceedings of any Meeting at which they are present, at a price not exceeding 2*s*. 6*d*., as the Committee shall from time to time determine. A Member who ceases to be a Member of the British Ornithologists' Union shall also cease to be a full Member of the Club.

Any Member who has resigned less than five years previously may be reinstated without payment of another Entrance Fee at the Committee's discretion.

TEMPORARY ASSOCIATES

(5) Members of the British Ornithologists' Union who are ordinarily resident outside the British Isles, and ornithologists from the British Empire overseas or from foreign countries, may be admitted at the discretion of the Committee, as Temporary Associates of the Club for the duration of any visit to the British Isles not exceeding the current year. An entrance fee of five shillings shall be payable in respect of every such admission if the period exceeds three months. The privileges of Temporary Associates shall be limited to attendance at the ordinary meetings of the Club and the introduction of guests.

MEETINGS

(6) The Club will meet, as a rule, on the third Tuesday in the months of January to May inclusive and September to December inclusive, at such hour and place as may be arranged by the Committee. At these Meetings papers upon ornithological subjects will be read, specimens exhibited and described, and discussion invited.

(7) The Annual General Meeting of the Club shall be held on the day of the April Meeting of each year, and the Treasurer shall present thereat the Balance Sheet and Report; and the election of Officers and Committee, in so far as their election is required, shall be held at such Meeting.

(8) A Special General Meeting may be called at the instance of the Committee for any purpose which they deem to be of sufficient importance, or at the instance of not fewer than fifteen Members. Notice of not less than two weeks shall be given of every Annual General Meeting and Special General Meeting.

INTRODUCTION OF VISITORS

(9) Members may introduce visitors at any ordinary Meeting of the Club, but the same guest shall not be eligible to attend on more than three occasions during the year. No former Member who has been removed for any cause, and who has not been reinstated, shall be allowed to attend as a guest.

'BULLETIN' OF THE CLUB

(10) An Abstract of the proceedings of the Club shall be printed as soon as possible after each Meeting under the title of the *Bulletin of the British Ornithologists' Club*, and one copy shall be distributed gratis to every Member who has paid the current annual subscription.

Contributors are entitled to a maximum of fifty free copies of the *Bulletin* and if they desire to exercise this privilege they should give notice to the Editor when their manuscript is handed in. Copies in excess of the fifty free copies can be ordered at the same time. These will be supplied by the publishers to whom payment at current rates shall be made on demand.

Descriptions of new birds may be published in the *Bulletin* when such cannot be communicated at the Meeting of the Club. This shall be done at the discretion of the Editor.

(11) No communication, the whole or any important part of which has already been published elsewhere, shall be eligible for publication in the *Bulletin*, except at the discretion of the Editor; and no communication made to the Club may be subsequently published elsewhere without the written sanction of the Editor.

TRUST FUND

(12) (a) Any stocks shares or other securities or money from time to time bequeathed or given to the Club shall be vested in trustees for the Club unless in any particular case the Club shall by a special resolution otherwise decide, and any other securities, money or other property (whether real or personal) from time to time belonging to the Club may be vested by or with the consent of the Committee in trustees for the Club.

(b) Any property to be vested pursuant to this Rule in trustees for the Club shall be paid or transferred to or vested in, deposited with or otherwise placed under the control of trustees or a bank or other trust corporation to be held upon such trusts for the benefit of the Club and with or subject to such powers and other provisions as may be approved by a special resolution of the Club and declared by or contained in a formal deed, including provision for the purchase out of the trust funds of a house or other building, land or other property for the use for all or any of the purposes of the Club.

(c) The Committee may pay to any bank or other trust corporation so appointed such remuneration for acting as trustee for the Club as may from time to time be agreed between the Committee and the trustee.

AMENDMENT OF RULES

(13) These Rules or any of them may be revoked or amended and any new rule or provision may be substituted or added by a special resolution.

(14) In these Rules "a special resolution" means a resolution passed by a majority of not less than three fourths of the members voting thereon at a General Meeting of the Club of which not less than two weeks' notice specifying the intention to propose the resolution as a special resolution has been given.

The Caxton & Holmesdale Press, 24 South Park, Sevenoaks

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

BRITISH MUSEUM
NATURAL HISTORY

PURC
– 5 JAN 1959

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 1

January
1959

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

Volume 79
Number I
Published: 1st January, 1959

PURCHASED
– 5 JAN 1959

BRITISH MUSEUM 7 NATURAL HISTORY

The five hundred and sixty-ninth meeting of the Club was held at the Rembrandt Hotel, S.W.7 on Tuesday, 16th December, 1958, following a dinner at 6.45 p.m.

Chairman: MR. C. W. MACKWORTH-PRAED

Members present, 47; Guests, 12; Guests of the Club, Professor M. F. M. Meiklejohn; Monsieur and Madame Olivier; Major G. Pye-Smith; Mr. R. Spencer and Captain G. Yeates. Total, 65.

The Chairman opened by welcoming Monsieur G. Olivier, President-Elect of the French Ornithological Society and Madame Olivier.

Controversial Discussion

The Christmas Meeting was set aside as A Controversial Evening in which the subject was "**Do Nesting Birds need protection from Egg Collectors, Ringers, Photographers and Bird Watchers? Do the contributions to science of these enthusiasts justify the disturbance they cause?**"

The prospect of battle brought out an exceptionally large number of members with the seniors reminiscing about the Good Old Days of full-blooded argument in the Club before ladies were admitted. For the discussion Mr. Max Nicholson took the Chair though refuting the suggestion that he was a volunteer for the task.

Professor M. F. M. Meiklejohn opened on behalf of the birds. With a wicked humour and in a spirit of sweet unreasonableness he castigated all who interested themselves in birds as unmitigated nuisances to the birds themselves, differing only in degree from the Tripper in his Ornithological Alphabet who "planted her stern, onto the nest of a Roseate Tern." He divided the nuisances into four categories the least harmful of which were the slothful ones who watched birds as a pleasant way of spending a day and who were content with ticking off their species list on long-distance identifications usually provided by someone else. The other three categories were inspired by the less innocuous motives of envy, avarice and ambition. The Enviers were particularly dangerous since they concentrated their attentions on rareties in an attempt to keep up with the Jones's. The Avaricious who sold eggs or information were self-condemned, while among the Ambitious he classed all those struggling to win bars to their B.Sc's by filling the ornithological journals with papers of statistics which no one ever read to the end. (A later speaker suggested that few people even read the beginning).

Major-General C. B. Wainwright followed. His main plea was that, along with the publicity given to birds by the press and the BBC, an attempt should be made to teach some elementary field craft to would-be watchers. He cited poachers as causing the least disturbance since their livelihood depends on field craft.

Major G. Pye-Smith, representing the Jourdain Society dissociated any members of the Society from Professor Meiklejohn's category of Enviers, since responsible oologists had long realised that nothing was to be learnt from the eggs of rare nesting species in Britain. He also cited the value of bird's nesting, if properly undertaken, as training in natural history for the young. Turning to the attack he wished some of the not always well-informed critics of egg-collectors would direct their energies to preserving the habitats of some nesting birds from the depredations of modern agriculture and land development. He introduced Brigadier E. L. Simson as an ally to demonstrate with an exhibition of some clutches of common birds' eggs that there was still much to be learnt on the causes of variation in egg patterns and sizes.

Captain George Yeates won immediate sympathy for the photographers in disclaiming any desire to contribute to science, though admitting, almost reluctantly, that the introduction of the electronic flash had given scientists a better understanding of the mechanics of flight. He thought that if justification was needed for photography it would be found in the part it had played in encouraging the mounting interest in birds, on which ultimately the survival of many species would depend.

At this point it was unfortunately necessary for the Chairman to leave, not because he feared the meeting might get too hot, but because he had to return to Lydd for another controversial meeting on the future of Dungeness as a nature reserve. This gave him added reason to support whole-heartedly Major Pye-Smith's plea for energy in the preservation of nesting habitats. He reinforced this with an apt plea for more unity among bird-lovers in combatting outside threats to bird life, which momentarily rallied all opposing factions in some semblance of harmony. Advantage was taken of the ensuing lull for a break for refreshment.

When the discussion was resumed the egg collectors took some nasty knocks until Dr. W. Serle brought an unexpected champion to their cause, and one moreover not present to be shot at, in showing that Moses had given them their first charter (Deuteronomy 22, verses 6 and 7). Captain C. R. S. Pitman and Dr. T. Clay also supported the taxonomic and scientific value of eggs of little known African birds, and of the specific proteins in egg albumen.

Among other contributions some criticism was directed at the ringing of nestlings which was largely refuted by Mr. R. Spencer who showed that the recovery of many birds known to have been ringed in the nest was ample proof that the operation did not lead to the high fatalities suggested, and furthermore was of great value in studying longevity in birds.

The meeting eventually closed in a spirit of seasonal goodwill. B.P.H.

Exhibition of an aberrant Yellow Wagtail, *Motacilla flava flava* Linnaeus obtained in British Cameroons

by DR. WILLIAM SERLE

Exhibited at the December Meeting

A male Yellow Wagtail, *Motacilla flava flava* Linnaeus, in fresh summer plumage, shot by me on 16th March, 1951 on the sea shore at Victoria, 4°N, 9°12′E, British Cameroons is abnormally coloured.

The mantle, scapulars, back, rump, upper tail coverts, the fringes of the rectrices, and the edges of the inner secondaries, and of the greater, median, and lesser wing coverts are dull orange instead of the normal yellowish-green. And the chin, throat, breast, belly, and under tail coverts are bright orange instead of bright yellow.

The Yellow Wagtail is an abundant winter visitor to the British Cameroons, but apart from the one specimen described above I have no record of this variant orange form, which is easily picked out in the field.

A new race of *Mirafra africana* Smith from British Cameroons

by DR. W. SERLE

Exhibited at the December Meeting

Mirafra africana bamendae new race

Description: The blackish and rufous upperparts similar to but slightly darker in shade than *Mirafra africana henrici* Bates. Ground colour of the underparts similar to but considerably darker than *M.a.henrici*, the lower breast, belly, and under tail coverts being rich buff of about the same shade as that of *Mirafra africana stresemanni* Bannerman.

Distribution: The open grassy hill tops and hillsides near Sabga Pass, Bamenda, at an altitude of 5,000 to 5,500 feet, British Cameroons.

Type: In the British Museum. Adult male, near Sabga Pass, 6°N, 10° 17′E, 5,000 feet (altmeter reading), 12 miles east of Bamenda, British Cameroons. 9th November, 1956. Collected by Dr. William Serle. Collector's No. C.6170. Brit. Mus. Reg. No. 1958–25–1.

Measurements of type: Wing 89; culmen 16; tail 61; tarsus 28 mm.

Soft parts: Iris hazel; feet fleshy-brown; bill blackish above and dull white below.

Remarks: The Bamenda highlands is a new locality for the Rufous-naped Lark. The new form is darker than any described race of *Mirafra africana.* In appearance it is nearest to *M.a.henrici* of Mount Nimbi, French Guinea, 1,200 miles west of Bamenda. Geographically the races *M.a.kurrae* Lynes of Darfur and the Jos Plateau, *M.a.stresemanni* of the Ngaundere highlands, and *M.a.occidentalis* (Hartlaub) of the Gaboon occur much nearer to *M.a.bamendae* than does *M.a.henrici.*

The five adults collected at Sabga Pass are a very uniform series. The type collected in November is in fresh plumage; the other four collected in January and April are slightly worn, but in shade they closely resemble the type, and below are several degrees darker than the type of *henrici* which is also a worn bird. Whilst the upperparts of *bamendae* bear little resemblance to the rich deep cinnamon rufous of *stresemanni*, the underparts are nearer to this form than to *henrici* not only in respect of the ground colour of the breast and belly but also in respect of the cinnamon under wing coverts and the cinnamon feather centres of the lower breast.

The measurements in mms. of three other adult males and one adult female all obtained near Sabga Pass are: ♂♂: wing 89,89,89; culmen 16,16,16; tail 57,59,59; tarsus 27,29,27: ♀: wing 81, culmen 14; tail 53; tarsus 28.

Some Colour Varieties of Wild Pigeons

by DEREK GOODWIN

Received 30th August, 1958

Under domestication and artificial selection the Rock Pigeon *Columba livia* has shown, perhaps, greater plasticity than any other animal. In particular it has produced a very great number of different colours and colour-patterns which have rendered it of much interest to geneticists. Most of the work previously done on the genetics of domestic pigeons has been summarised and presented in simple language by Levi (1940) in a book which no one interested in any aspect of domestic pigeons can afford to overlook.

There are a considerable number of aberrantly coloured wild pigeons in the National Collection. Examination of these variant individuals shows that they are nearly all very similar in appearance to, and probably homologues of known colour varieties of domestic pigeons. All these specimens were taken in a wild state showing that similar variations to some of those which have been produced in *C. livia* in domestication can and do occur as spontaneous mutations in purely wild stocks of other pigeon species. The commonest among them are those which appear to bear a similar relation to the normal colour of their species as does the so-called ''silver'' colour variety of *C. livia* to the normal ''blue''.

It is significant that all such specimens as are sexed are females for it suggests that, as in the silver domestic variety, these colour characters are also sex-linked. In *livia* the silver character, which is the dilute of blue, is known to be sex-linked. Such silvers as are bred from two blues, of which the male must be heterozygous, being always females. Obviously in wild populations, in which such aberrant specimens are rare, it would be most unlikely for a ''silver'' female to pair with a heterozygous male carrying the factor for this colour. Indeed it is probable that in any case such females would have little breeding success in the wild since the feathers of ''dilute'' coloured pigeons, like those of most albinos, are much less resistant to wear and damage as well as being, in many cases, more conspicuous than the normal plumage.

There are only two instances among all these specimens of alterations in the colour-pattern. In one, the ''red'' specimens of *palumbus*, this closely parallels the alteration of pattern found in similarly coloured domestic *livia*. Even in the other case, that of the *Chalcophaps indica* with spotted underparts these spots may be the homologues of the black ''chequering'' sometimes found on the flanks and rump of chequered or dark-winged blue domestic pigeons.

Wedge-tailed Green Pigeon *Treron sphenurus* (Vigors). *No.* 1881. 5.1.3119 ♂.

Mainly lacking the green and yellow colour on the visible parts of the feathers which give to normal green pigeons their characteristic colouring. As a result the normally green parts of the mantle, back, rump and wings are clear grey with the yellow wing markings replaced by white. The head, throat, lower breast and belly are pale grey with a greenish-yellow wash. The breast is a slightly vinaceous pink, washed with yellow. The specimen is partially albinistic, having several white feathers in its left wing. It emphasises the close similarity of colour-pattern between the green pigeons *Treron* sp. and the typical pigeons of *Columba* and allied genera which is normally masked by the green and yellow tips to the feathers of the former group. Except in its partial retention of yellowish colour it reminds one forcibly of blue varieties of the parrakeets *Psittacula* and lovebirds *Agapornis*.

Many-coloured Fruit Dove *Ptilinopus perousii* Peale
No. 1864.4.7.3. *Juvenile, unsexed*

This specimen is entirely yellow and white in colour. The green on the head, back, rump and breast of a normal juvenile is replaced by a bright yellow; the greyish basal portions of the feathers are white instead of greyish. On the median and greater wing coverts and the secondaries the green, bronze-green and grey areas are replaced by white and only the feather fringes are coloured, these being of a brighter yellow than in normal juveniles, though not strikingly so. The primaries and rectrices are white with narrow yellow tips.

Pacific Pigeon *Ducula pacifica* (Gmelin)
No. 1939.12.12.25 ♂

Plumage entirely white with a yellowish tinge, probably due to staining, about the face, rump, shoulders and underparts. It shows the poor quality plumage common in albino birds, all the primaries and rectrices, except for some recently renewed primaries, being frayed and broken.

New Zealand Pigeon *Hemiphaga novaeseelandiae* (Gmelin)

No. 1939.12.9.3738 ♂

The general appearance of this bird is light buff, with dull red-purple on mantle and wing-coverts. All the grey or green feathers of the normal bird are replaced by deep buff or greyish buff. Where exposed to light the older feathers have faded to pale whitish-buff. The tail (purplish black in normal) is deep chocolate brown, exposed feathers having faded to buff. All the areas that are purple in the normal specimen are so in this bird, differing only in being slightly redder and duller.

Blue Hill Pigeon *Columba rupestris* Pallas

No. 1927.1.10.15 ♀

This bird is considerably paler than normal and of a general very pale lavender and lavender-brown colouration. The wing coverts are very pale lavender-grey instead of the normal bluish grey, the normally blackish areas on tail and primaries are replaced by lavender-brown, which is faded to pale chocolate brown in old feathers; the green and purple iridescence on the neck and breast is paler and somewhat different in hue from that of the normal bird. The white tail bar is ill-defined and the darker parts of the tail show faint wavy barring. The wing bars are pale chestnut instead of black, and are edged with a thin line of dark grey. Superficially this bird appears very similar to the ''silver'' colour in *C.livia*, but the appearance of its tail and wing bars make it almost certain that it is not just a ''simple'' dilute of the normal form, but carries also some factor similar to or homologous with that causing ''stencilling'' (Levi 1940) in domestic pigeons.

Wood Pigeon *Columba palumbus* Linnaeus

No. 1943.2.21.1 ♀

As compared with normal specimens this bird has the pink of the breast paler and duller and the iridescence on the neck less intense. The bluish-grey of head, rump, upper tail coverts and outer wing coverts is replaced by pale lavender grey, the grey of the mantle and wings by buffish grey and the blackish areas of tail and primaries by dull chocolate colour. Where exposed to light old feathers have faded to pale creamy buff.

No. 1935.2.18.1. *Unsexed*

In general similar to the previous specimen but less grey and more buff in tone; new feathers of the normally grey areas almost chocolate but older ones are faded, where exposed, to whitish-buff. Breast a slightly darker pink, white of neck suffused with deep cream. Both these specimens appear to be equivalent to the ''silver'' colour variety of *C.livia*.

No. 1939.12.3.44. *Unsexed*

Head normal, underparts nearly so but belly more buffish-pink and flanks and under tail coverts paler and less greyish. ''White'' neck patch golden cream and extending round back of neck. Wing coverts adjacent to the white wing patch normal. Rump and upper tail coverts normal. Mantle and most wing coverts deep golden-buff, most feathers freckled or grizzled with greyish to a varying degree. New primaries normal but suffused with pinkish-brown, whereas the old ones have evidently faded to mixed buff and greyish. One tail feather normal, rest stippled buff and greyish in areas normally dark. Tail pattern normal. This bird is of a particular interest in that the distribution of golden buff on the wing coverts corresponds to the purple, or chestnut when faded, white-spotted areas on the wings of the Speckled Pigeon *C.guinea*, a species which is otherwise mainly grey in colour like its relatives.

No. 1923.3.8.1. ♂

Breast as normal but duller. Throat pinkish where normal is grey. Underparts entirely dull pale pinkish except on under tail coverts where there is some whitish grey. Neck patches pinkish cream instead of white and extending right round back of neck in one broad half collar. Wing quills browner and in some cases grizzled with white at base. Tail wholly dark with no trace of the normal pale bar. Mantle, wing coverts and some secondaries deep brownish pink. Other secondaries pale buff, grizzled grey and pink. Top of head grey, shading to pink on nape.

No. 1936.3.10.1. *Unsexed*

As previous specimen but a little paler and brighter with a buffy tinge to the pink wing coverts. In appearance both are very similar to the dominant red colour variant of *C.livia*. In this connection it seems significant that in *C.livia* the dominant red colouration is always linked with absence of the dark tail bar and in these two ''red'' Wood Pigeons—alone among the colour varieties examined—there is a similar aberrancy in tail pattern, although in their case it is a pale bar which is absent.

No. 1941.9.1.1. ♀

Head and underparts paler than normal. Most contour feathers and all quill feathers on upper parts with pale or whitish bars, patches or central areas, but not, however, sharply demarcated from areas of normal colour. These aberrations are most noticeable on wing and tail quills. All trace of normal tail pattern absent. As compared with the normal condition this specimen shows similar differences to that of the opal or mosaic *C.livia.*

No. 1935.12.10.1. ♀

All white except for five rectrices, five primaries, most wing secondaries and some wing-coverts and scapulars which are normal. All the normally coloured feathers show white tips and or some degree of white grizzling.

No. 1927.11.13.1. ♀

Head normal colour intermixed with some white feathers. Neck, breast and underparts white with some normal feathers inter-mixed. Primaries, some secondaries and one tail feather normal; the rest of plumage pure white. No white grizzling on any of the normal feathers.

Eared Dove *Zenaida auriculata* (Des Murs)

No. 1892.2.10.884. *Unsexed*

Partial albino. Hind-neck nearly all white and a sprinlking of white feathers on breast, head and mantle.

No. 1934.10.21.230. ♀

The normal brownish-grey and grey of the upper parts replaced by light greyish-chocolate; all old feathers faded to creamy-white where exposed to light. Underparts much as normal but with a buffy rather than the usual mauvish tinge to the pink.

Red-eyed Dove *Streptopelia semitorquata* (Rüppell)

No. 1920.6.7.7. *Juvenile, unsexed*

Complete albino; plumage entirely white, bill and legs of dried skin yellow.

Collared Dove *Streptopelia d.decaocto* (Frivaldsky)

No. 1889.2.2.1516. *Unsexed*

Superficially very similar to the creamy-buff domesticated form of *S.d.roseogrisea* (usually given specific status as *S.risoria* Linn.) but differing in having the black and blackish-grey areas of neck and tail replaced by greyish-chocolate and in retaining the pinkish colour of head and neck. This pinkish colour is, however, without the mauve suffusion of the normal bird.

No. 1889.2.2.786. *Unsexed*

As normal but paler and all old exposed feathers of upper parts faded to creamy white. The primaries light drab (faded to white where exposed) instead of the normal black. The normally black areas on neck and tail apparently lacking any pigmentation so that the bird has a w*hite* neck ring and white instead of black on the basal parts of the rectrices.

Mourning Collared *Dove Streptopelia decipiens* (Hartlaub and Finsch)

No. 1919.12.17.70 ♀

Very similar to the domestic Barbary Dove and an exact homologue of the aberrant *decaocto*, no. 1889.2.2.1516, described above. General colour of upper parts warm reddish-buff instead of drab brown, the old feathers having bleached to pale cream colour. The normally black markings on neck and tail replaced by greyish-chocolate. Pink on neck and breast with much less greyish-mauve suffusion than normal. Belly creamy white instead of greyish.

No. 1915.12.24.267 ♀

Partial albino, showing a degree of asymmetry unusual in such specimens. Most, but not all, of the coverts and secondaries of the left wing are pure white. All other feathers, including those of the right wing, are normally coloured. There are no parti-coloured or grizzled feathers anywhere.

Turtle Dove *Streptopelia turtur* (Linnaeus)

No. 1934.1.1.1814 ♂

Semi-albino. Head, neck and underparts largely white but with a sprinkling of normal feathers. Upper parts normal but with a scattering of white feathers and many of the normal feathers grizzled with white.

Eastern Turtle Dove *S. orientalls* (Latham)

No. 1897.10.30.467. *Unsexed*

As previous specimen but everywhere more normally coloured than white feathers and only a very few grizzled feathers.

Laughing Dove *Streptopelia senegalensis* (Linnaeus)

No. 1889.2.2.570 ♀

Partial albino. Head and tail normal except for a few white feathers on former. Neck, back, wing-coverts and under parts with about equal amounts of white and coloured feathers, giving a patched and spotted effect. Wing quills normal except for one white primary and one white secondary in the left wing and two white secondaries in the right. None of this bird's normally coloured feathers is grizzled or marked with white.

No. 1889.2.2.560. ♂

As previous specimen but with much less white in its plumage. Crown and nape with about equal numbers of white and normal feathers. Rest of plumage normal but with a sparse but conspicuous scattering of white feathers on wing coverts, rump, breast and under parts.

No. 1889.2.2.575 *Unsexed*

Semi-albino. Head and under parts mainly white but with a few partially coloured feathers. Upper parts with about one third white and two-thirds coloured feathers but most of the latter grizzled with white to a greater or lesser degree. Wing and tail quills normal but a few of the latter grizzled with white. Display plumage on neck less strongly bifurcated than in a normal specimen and with the tips of the feathers white instead of shining coppery brown.

No. 1939.3.13.69

Plumage mainly white with a scattering of normally-coloured feathers except on forehead, wings and tail which have about equal numbers of white and coloured feathers. Most, but not all, of the coloured feathers are grizzled with white to some extent.

No. 1931.6.6.27 ♀

Compared with a normal female this specimen has those feathers of the upper parts which are normally warm brown, with somewhat paler and more reddish brown tips, of a pale fawnish-sepia tipped with pale pinkish-fawn, this latter having bleached to pale cream colour in all but very new feathers. The normally slate-blue areas of the wings are pale silver grey. The pink of breast and head is much paler and shows only a slight trace of the strong purplish tinge normally present. The feathers of the display-plumage on the neck have sepia bases and shining pinkish-fawn tips instead of the normal black and shining coppery brown. The general effect is of a pale silvery fawn bird with a pale pinkish head and breast. This variety appears to be equivalent to the "silver" colour in *C.livia.*

No. 1889.2.2.569. *Juvenile, unsexed*

This specimen stands in the same relation to a normal juvenile as does the last-described to a normal adult, if allowance is made for it being of the Indian instead of the African form. The normal light brown of the upper parts is replaced by pale silvery-fawn with narrow reddish-buff, instead of sepia, sub-terminal bands against which the pale creamy fringes of the feathers, although paler than those on a normal juvenile, do not show in such contrast. The slate grey parts of the wings are pale silver grey, suffused with fawn. The head and breast are pale pinkish-fawn, shading to white on the belly.

Spotted Dove *Streptopelia chinensis suratensis* (Gmelin)

No. 1895.7.14.3285. *Unsexed, in moult*

Head pale silver-grey, throat silvery white. Lower throat and breast pale silver with a faint pink tinge on the new feathers which has faded to a creamy hue on the old ones. The areas of the upper parts normally sepia brown are pale silver grey with the pinkish-fawn markings replaced by very pale silvery-cream with a faint pink tinge. The blackish parts of the wings and tail are replaced by a darker, but still quite pale, silver grey. The normally blue-grey wing patches are pale silver grey and do not contrast with the rest of the wing as they do in a normal bird. The feathers of the display plumage on the neck are brownish-grey with dull white tips instead of black and shining white as in a normal specimen. The general appearance of this bird (except for the display plumage) is pale silvery grey, unlike any other aberrantly coloured pigeon in the collection but very similar to some aberrantly coloured Starlings *Sturnus vulgaris* Linnaeus.

Ruddy Ground Dove *Columbina talpacoti* (Bon.)
No. 1845.5.1.56 *unsexed*

At first glance appears almost entirely cream-coloured, this colour replacing the vinous-chestnut areas of the normal bird. The forehead, crown and nape are pale drab grey and the primaries are also tinged with this colour. The normally black outer rectrices and under wing coverts are greyish fawn, as are also the small "black" markings on the lesser wing coverts. The larger black markings on the median and greater wing coverts are replaced by white markings edged with a thin line of dark fawn. The appearance of these wing markings is precisely similar to that brought about by the "stencil factor" in domestic *Columba livia* and would seem most probably due to an homologous genetical condition.

Emerald Dove *Chalcophaps indica* (Linnaeus)
No. 1889.2.2.883. ♂

This bird is normal in colour except that many of the mauve-pink feathers on its lower breast, belly and flanks have large greenish-bronze spots, the colour and texture of these spots being similar to those of the feathers on the mantle and scapulars. Most of the spotted feathers on the lower breast have a single spot on one side of the central shaft or two spots, one on each side of it. In some of the belly and most of the flank feathers there is an increased amount of bronze resulting in a single very large spot or patch covering most of the exposed terminal portion of the feather but in no case extending quite to the terminal edge which is always mauve-pink.

References:
Levi, W. M. 1940 "The Pigeon", Sumter, S. Carolina, U.S.A.

Notes on a Collection of Birds made in Iraq by Flight Lieutenant David L. Harrison

Part I

by Dr. James M. Harrison

Received 10th August, 1958

During the period August 1953 to March 1955 Flight Lieutenant David L. Harrison, R.A.F., made a collection of birds in Iraq which included in all seventy-nine species. Since many of these are well known in Iraq no special mention is called for, however some others for which there exists material interest as to status, subspecific determination or other relevant matter, comment is made as likely to extend our knowledge of the ornithology of the Middle East.

A recent paper by Chapman and McGeogh[1] has proved of great value, both in detail of field observations and also in providing a succinct account of the avifauna of the Habbaniya area and the changes which have occurred, while in 1956–1957 Mr. H. J. Moore and Dr. C. Boswell[2] published their *Field Observations on the Birds of Iraq*, thus adding another important publication to the literature of the ornithology of that country.

After the long interval since Ticehurst's accounts of the birds contained in the *Survey of Iraq Fauna* (1915–1919)[3] Allouse,[4] in 1953 published his work, *The Avifauna of Iraq*, an important and up to date presentation of the subject. The following year Meinertzhagen's *The Birds of Arabia*[5] appeared as the *sine qua non* for all serious students of Arabian ornithology.

In addition to the specimens collected by Flight Lieutenant Harrison, further acquisitions were secured when he was joined by his brother, Dr. Jeffery G. Harrison and his sister-in-law, Dr. Pamela Harrison in Habbaniya during October 1954. Many interesting records and field observations were made by expeditions into the surrounding country, some of which have already been published by Dr. Jeffery Harrison.

My grateful acknowledgements are hereby expressed, primarily to Dr. David Harrison for the many specimens he collected, often under very great difficulties, as well as of course to Drs. Jeffery and Pamela Harrison for the specimens received from them and also to them all for asking me to work out the collection and publish the results. The value which this communication may be found to possess is of course largely due to their tireless efforts in the field and to helpful criticism and comment during the preparation of this paper.

The order of the species is that used by Allouse in *The Avifauna of Iraq*.

SYSTEMATIC LIST

LITTLE GREBE *Podiceps ruficollis iraquensis* Ticehurst

Owing to lack of material Ticehurst,[3] when writing on the avifauna for the *Survey of Iraq Fauna*, identified specimens of this species as *P.r.capensis* Salvadori, later[6] separating them under the above name.

Two males and two females were collected; one of the males and the two females were shot by Squadron Leader S. Seligman on 6th November 1954 at Ramadi Old Cut, Dulaim Liwa, while the second male was collected by Dr. Jeffery Harrison on 18th October 1954 at Habbaniya.

All four specimens have been compared with the series in the British Museum, (Natural History) and conform in characters to the above race in showing considerable white on the outer vanes of the secondaries extending in three of them to the bases of the primaries, while they are also small-winged individuals.

Measurements: 2 ♂♂ w.= 90mm. 92.5mm. 2 ♀♀ w.= 87.5mm. 95.5mm.

CORMORANT *Phalacrocorax carbo sinensis* (Shaw and Nodder)

This species is recorded as a winter visitor in Iraq. A single female was obtained on 21st September 1954 at Diban, near Habbaniya. The specimen shows the typical green reflections of the southern form. It is a subadult with a light coloured, though not unspotted belly. There is extreme fading and wear of the plumage of the mantle, wings and tail.

Measurements: w.= 232mm. b.= 55.5mm. t.= 66mm. tl.= 137mm.

LITTLE EGRET *Egretta garzetta* (Linnaeus)

A Little Egret, which had been ringed near Astrakhan on the delta of the Volga river as a juvenile on 10th July 1953 was shot near Habbaniya on 30th November of the same year. Only the tarsus and foot were available for examination.

SMEW *Mergus albellus* (Linnaeus)

As this species is regarded as an uncommon winter visitor, the record of an immature drake shot on 21st February 1954 at Majarrah Cut, near Habbaniya is worthy of note.

LONG-LEGGED BUZZARD *Buteo rufinus rufinus* (Cretzschmar)

The very involved taxonomy and the difficulty of the identification of buzzards in the field, and even of some specimens in the hand is stressed by Meinertzhagen (*loc.cit.*)[5] and others, and it need only be mentioned here that an adult male was collected on 2nd January 1954 by Dr. A. Rogerson near Ramadi.

This specimen is quite typical of the red phase of *B.r.rufinus* and the tail is completely devoid of any sign of barring.

Measurement: w.= 445mm.

PALLID MERLIN *Falco columbarius christiani-ludovici* Kleinschmidt

An adult male was collected by Squadron Leader S. Seligman on 15th January 1955 at Haur-al-Hasa at the edge of the desert. The species was noted as scarce in the district by Dr. David Harrison.

Measurements: w.= 197mm. b.(from cere) = 12mm. t.= 36.5mm. tl.= 123mm.

KESTREL *Falco tinnunculus rupicolaeformis* Brehm

Meinertzhagen (*loc.cit.*)[5] in discussing this species points out that this race is unsatisfactory. It is stated to be smaller (wing rarely exceeding 260mm.) and to be generally darker and richer in colour. It would seem however from measurements of this species in the western end of its range that neither on size nor on colour is *F.t.rupicolaeformis* well differentiated, as there are numbers of individuals in western Europe with relatively small wing measurements. Possibly investigation of a really long series of breeding birds from Iraq might substantiate the race on measurement; on colour the form would certainly not hold good, as birds can be found from western Europe which excatly match the eastern birds. The following specimens were collected:—

Measurements: ♂ w.= 230mm. (adult) ♀ w.= 249mm. (adult) ♀ w.= 246mm. (subadult) ♀ w.= 248mm. (subadult) ♀ w.= 252mm. (subadult).

LITTLE CRAKE *Porzana parva parva* (Scopoli)

Allouse (*loc.cit.*)[4] describes this species as a common winter visitor. Ticehurst (*loc.cit.*)[3] mentions four specimens including a male from Falluja taken in late April, and birds of this species were seen by Chapman and McGeogh (*loc.cit.*)[1] throughout that month, evidence suggestive of breeding. A bird thought to be of this species was recorded as seen on 2nd May 1943 at Hindiyah by Moore and Boswell, (*loc.cit.*)[2] while the earlier records include some taken or observed during September.

An adult, female by plumage, was obtained at Basra by Mr. M. Stephenson in March 1954, while an immature female was shot by Dr. David Harrison at Ramadi on 19th September 1954.

SPUR-WINGED PLOVER *Hoplopterus spinosus* (Linnaeus)

The status of this species in Iraq has yet to be more clearly defined. Meinertzhagen (*loc.cit.*) Addendum, No.35[5] states ''Has straggled to Iraq''. Allouse (*loc.cit.*)[4] similary quotes Sarudny (1911) who recorded it as a winter visitor in the Karun area. Ticehurst (*loc.cit.*)[3] records that Pitman saw some near Kurna in January and Weigold[7], reported the species as breeding at Bumbudj and Beredjik on the Syrian side of the border. A specimen (*fide* Allouse, *loc.cit.*)[1] was shot by W. H. Jeffery (20.IV.1951) at H.I. Station. To Chapman and McGeogh (*loc.cit.*)[1] belongs the credit of establishing this species as a breeding bird in Iraq, while they also observed small parties from the middle of August. Moore and Boswell (*loc.cit.*)[2] mention sight records during September and that three were seen on 14th February 1943, at Baghdad.

A single adult was collected by Dr. Jeffery Harrison on 23rd October 1954, at Habbaniya. It was one of a family party.

GOLDEN PLOVER *Charadrius apricarius* Linnaeus

A single example of this species was shot by Dr. David Harrison on 26th December 1953 at Falluja on some agricultural land; no others were seen. Allouse (*loc.cit.*)[4] considers the species as probably a winter visitor. It would seem however, that it is not very common; Ticehurst (*loc.cit.*)[3] mentions three specimens obtained near Sheik Saad on 21st January 1921, while the European species is not specifically mentioned by Boswell and Moore (*loc.cit.*)[2] nor by Meinertzhagen, (*loc.cit.*)[5] for Iraq.

Chapman and McGeogh (*loc.cit.*)[1] mention the above named specimen, which is a male.

Measurement: w.= 184mm.

REDSHANK *Tringa totanus eurhinus* (Oberholser)

Allouse (*loc.cit.*)[4] remarks that the nominate race and the eastern form *T.t.eurhinus* occur side by side in winter. According to Ticehurst (*loc.cit.*)[3] the species arrives in mid-August departing again in mid-May and that some non-breeding birds remain throughout the summer. The latter observation is confirmed by Chapman and McGeogh (*loc.cit.*)[1]. Four winter specimens referred to by Ticehurst (*loc.cit.*)[3] are commented upon as ''Not distinguishable from W. European examples.''

A female collected on 16th October 1954 by Dr. Jeffery Harrison near Habbaniya appears to be a typically pale example of the eastern race.

Measurements: w.= 170mm. b. (from skull)= 52mm. t.= 50.5mm. tl.= 78mm.

CREAM-COLOURED COURSER *Cursorius cursor bogolubovi* Sarudny

A single example of this subspecies, a female, was collected on the Haur-al-Hasa by Dr. Jeffery Harrison on 13th October 1954.

An examination of this specimen with examples from North Africa and Egypt shows that it is considerably paler both above and below. The paleness extends over the whole of the upper surface from the base of the bill to the rump, while some of the upper tail-coverts are pale grey, the rectrices are however of about the same tone of pinkish-buff as in the North African and Egyptian specimens. The isabelline tone of the upper parts is washed with palest grey. The throat is whitish and the under parts are pale buffy-pink, slightly greyish over the pectoral region.

It is apparent that even in the Russian collections there is an insufficient material upon which to assess the validity of the Transcaspian race of the species. Its distribution is given (*Birds of the U.S.S.R.*, 1951, 3, 23,24) as a narrow strip running along the plain in front of the Kopet-Dag from the desert between Dzhebel and Nesbit-Dag in the north-west to the lower reaches of the Tedzhen Murgab in the east, where it extends further south along almost the whole area between Tedzhen and the Murgab.

The Russian authorities accept this race only provisionally from lack of material, a course which I have deemed it expedient to follow. I would however add that those specimens of the nominate form with which I have been able to compare the Iraq bird do not show the same degree of pallor and greyish wash.

There would appear to be no reason, on distributional considerations why *C.c.bogolubovi* should not stray into the territory of the nominate race on its south-westerly borders, a fact which should be recollected when evaluating the Transcaspian form.

Measurement: w.= 162mm.

BLACK TERN *Chlidonias niger niger* (Linnaeus)

Allouse (*loc.cit.*)[4] records a juvenile which was shot in Baghdad on 25th September 1950 as the first instance of the species in Iraq. As already recorded by Chapman and McGeogh (*loc.cit.*)[1] another juvenile was shot from a party of five terns on 24th October 1953, by Dr. David Harrison at Habbaniya.

(*to be continued*)

On the Race of Cattle Egret *Ardeola ibis* (Linnaeus) Occurring in the Ethiopian Zoogeographical Region

by MR. P. A. CLANCEY

Received 23rd August, 1958

In a short note in the *Durban Museum Novitates*, vol. iv, 1, 1952, pp. 21–22, I pointed out that the Cattle Egrets *Ardeola ibis* (Linnaeus) breeding in South Africa differed from the topotypical populations in having no marked seasonal change in the colouration of the bill and naked facial-skin, as certainly occurs in the south-western Palaearctic populations of *A.i.ibis*, described in 1758 from Egypt. In the South African bird the facial-skin is at all times yellowish, while the bill varies from between Light Cadmium/Deep Chrome and Orange (*vide* Ridgway, *Color Standards and Color Nomenclature*, 1912, pls. iii & iv), and there is no marked seasonal change, though well coloured breeding males show an intensification of the orange colour in the mandibles. Tucker, in Witherby, *et.al.*, *Handbook of British Birds*, vol. ii, 1939, p. 142, writes on the field characters and asserts that the "Legs are stated to be dull yellow outside the breeding-season, and apparently authoritative descriptions speak of breeding birds (at least in Africa) as having "yellow" or "orange-yellow" legs, but in Spanish birds in breeding-season legs are dull purplish-red, looking blackish at distance. Base of bill also becomes reddish in breeding-season." On page 144 of the same work the soft parts are described (by Witherby) as follows: "Adult summer (end April–May).—Bill yellow shading to vinous pink or reddish towards base; bare skin round eye bright violet-pink; legs dull vinous-red shading to dark brownish on feet; iris bright pinkish-red to yellow." The figures on pl. 74 show the colours of the soft parts as described. In South African *A.ibis* the legs and feet are at no time purplish-red, or dull vinous red on the legs shading to brown on the feet, being usually olivaceous or brownish yellow.

Since writing the note referred to above, I have been able to study the species in other parts of Africa, particularly in Kenya Colony, and find such populations to agree with the South African ones in showing no such colour metamorphosis (of the soft parts) associated with breeding activity, as is described for south-western Palaearctic birds. In view of these findings, I now consider it advisable to segregate the Ethiopian populations of the Cattle Egret as a distinct race from *A.i.ibis*, and with the new form I associate the populations resident in Madagascar and the archipelagos of the western Indian Ocean.

Reference to Sharpe, *Catalogue of Birds in the British Museum*, vol. xxvi, 1898, pp. 213–215, shows that the name *Bubulcus ruficrista* Bonaparte, *Conspectus Generum Avium*, vol. ii, 1855, p. 125: Madagascar or Zanzibar, is available. Name *ex* Verreaux MS. This name is acceptable, but in many respects it is an unsatisfactory choice, as the provenience of the *Type* is not known for certain, though it is believed to have come from either Madagascar or Zanzibar. The *Type*-specimen was at one time in the Paris Museum, but I am informed by Herr H. E. Wolters, *in litt.*, that it is now known to be lost. I here restrict the type-locality of *A.i.ruficrista* to Madagascar.

The range of *A.i.ruficrista* can be defined as the whole of the Ethiopian Zoogeographical Region, Madagascar and certain of the archipelagos in the western Indian Ocean. With the recognition of *A.i.ruficrista*, the range of *A.i.ibis* must be redefined. *A.i.ibis* ranges in the breeding season from southern Spain and Portugal and northern Palaearctic Africa (Morocco, Tunisia, Egypt), eastwards to Asia Minor, Transcaucasia, Iraq, northern Persia (Iran) and parts of Arabia.

The Asiatic representative of the species, *A.i.coromanda* (Boddaert), 1783: Coromandel, ranges from India, Ceylon and Burma, southern China (western Szechuan to Fokien), Korea, southern Japan, Formosa, Hainan, Philippines, Sunda Islands, Celebes, Ceram and Buru (*vide* Peters, *Check-List of Birds of the World*, vol. i, 1931, p. 109). *B.i.coromanda* has the pink areas in the breeding dress more rusty than in *A.i.ibis*, and on the ventral surface the rufous extends from the chin to the breast, and is not restricted to the breast as in *A.i.ibis*. It is also described as having longer legs and a greater area of the tibia devoid of feathers. No difference in the colouration of the soft parts between *A.i.ibis* and *A.i.coromanda* is recorded in the literature at my disposal. In view of the findings culminating in the recognition of *A.i.ruficrista*, it would be interesting to have new data on the colouration of the soft parts of *A.i.coromanda*, particularly in the breeding season.

In the recent A.O.U. *Check-List of North American Birds*, 1957, pp. 45–46, the Cattle Egret, which has within the past century colonized northern South America and is now extending its range into the United States, is listed as *A.i.ibis* (the Genus *Bubulcus* Bonaparte is still used for this species by American workers). It is believed that the Neotropical and Nearctic colonists may be *A.i.ruficrista* rather than *A.i.ibis*, as the former race has been increasing rapidly throughout Africa for many years.

Further Breeding Records from Northern Rhodesia

Part II

by MR. C. W. BENSON AND CAPTAIN CHARLES R. S. PITMAN

Received 15th July, 1958

Leptoptilos crumeniferus (Lesson).

The following further records are available:— (*a*) Seven or eight baobab trees, scattered over an area of about 300 acres, at 17°15′S., 25°24′E., 23rd August, 1957. Each contained about eight nests. Some nests still held eggs, but most were already hatched. One cracked egg found on the ground, 50 yards from the base of the nearest tree. (J. A. Gledhill & J. N. E. Johnson). (*b*) Colony of fifty nests in the tops of very tall trees in a 10-acre patch of waterlogged evergreen forest, Lunga Game Reserve, late August or early September, 1954. Nests quite inaccessible, containing young almost fully fledged. (J. B. Shenton). (*c*) Two small colonies, one of three nests, one of four, in trees within 50 yards of north bank of Zambesi, at approx. 29°33′E., 13th August, 1957. Each nest contained downy young. (G. E. Taylor). (*d*) Single occupied nest in a baobab, in the Lukushashi Valley at 14°00′S., 30°30′E., 29th April, 1957. (Estcourt).

Threskiornis aethiopicus aethiopicus (Latham).

Shenton reports a small colony of nests in *Acacia albida* trees in the water of a lagoon by the Luangwa River at about 13°S., late April, 1958. Nests large untidy piles of sticks, containing young almost fully grown but not yet able to fly.

Nettapus auritus (Boddaert).

Wedekind saw a pair of adults accompanied by four young not more than three-quarters of the size of their parents, on the Kafue River at 14°30′S., 26°35′E., after sunset on 12th May, 1958. The parents, which showed great agitation, were identified for certain, even though it was too dark to determine the coloration of the young.

R. A. R. Part found two nests at a shallow pan in Mopane woodland in the Gwembe Valley at 16°20′S., 28°43′E., 18th January, 1958. The area of water was about 2½ acres, which by August would be almost dried up. One nest was an untidy grass structure, under a log, on mud, and about twenty yards from the water's edge. One of the parents was seen standing by the nest, which contained two broken eggs. The other nest was in fairly deep water, and was a rough structure of grass containing six eggs. A good view was obtained of one of the parents as it flew from the nest, and six days later four very small goslings with both parents were seen in the vicinity. Part also saw four young not quite fully grown with their parents in a similar pan in the Gwembe Valley at 16°30′S., 28°30′E., 19th May, 1958. In colour they resembled the female.

Aegypius tracheliotus (Foster).

Coll. C/1 slightly incubated, 21st June, Lochinvar (Uys). Egg fairly elongate, dull white, finely pitted rough surface, but smooth to touch, nest stained; a few dull brownish red spots and specks at pointed end, on a very few pale purplish slate spots; size 96.0 x 67.6mm. Nest in the top of a 30ft. high *Acacia albida* tree on an open plain; of sticks, lined with grass and hair.

Uys also found an occupied nest at Lochinvar on 20th May, in the top of a 10ft. high *Acacia nigrescens* tree on an open plain. The nest was not inspected until 7th June, when it contained a single egg, white, heavily freckled all over with brown, size approx. 90 x 68mm. By 2nd July the young was hatched. On 27th July it was observed to be in greyish down, with feathers starting to emerge in the region of the primaries and scapulars. The bill was blackish, tip whitish; cere bluish white, similarly coloured bare skin on head extending to the ears; legs and feet bluish white, claws dark slate.

Accipiter spp.

The late E. Hough, who was an ardent falconer, and made a special study of raptorials, made the following observations in the Kasempa District in 1951. A nest of *A.m.melanoleucus* Smith was found near the district headquarters on 25th November, by a stream. It contained two young about 2½ weeks old. The wing of a *Coracias caudatus* was noticed in the nest. On 24th November, in the same locality, a nest of *A.tachiro sparsimfasciatus* (Reichenow) containing two young about two weeks old was found. For 18th September he records a nest of *A.badius polyzonoides* Smith containing two eggs, in the north-west corner of the Kafue National Park.

Stephanoaëtus coronatus (Linné).

Took captured a young bird near to flying from a nest at Mburuma, 15°26′S., 30°14′E., on 1st May, 1954. The nest was a large structure some 50ft. up in the first fork of a tall tree in a thicket near a perennial stream. The bird was kept for nearly six months, when it was released. It then rapidly reverted to the wild state, and at the end of a week finally departed.

Francolinus levaillantii crawshayi Ogilvie-Grant.

A covey of seven was observed by Shenton on the Nyika Plateau, 3rd June, 1958, containing two juveniles only about half grown in size. Two males in the covey were fighting each other and later one of them copulated. These two males were subsequently collected, and their identification as this species confirmed by C.W.B.

Guttera edouardi edouardi (Hartlaub).

E. G. Straight saw two adults with eight small chicks, less than one week old, in the Gwembe Valley near Chirundu, 7th April, 1958. E. J. Taljaard saw two separate lots of young less than one week hatched near the Musa River on the same day in early January, 1957, and six young of similar size in the same locality on 10th January, 1958. All these observations were made from a landrover, on tracks through dense thickets, onto which the birds had ventured, and close-up views obtained.

Porphyrio porphyrio madagascariensis (Latham).

Coll. C/3 fresh at Msweba, 11th April, 1958 (Wedekind). Eggs smooth, though very finely pitted, with slightly glossy appearance; also, several rough nodules at top of each egg, which are an unusual type, entirely lacking the usual elongated spots and blotches. Colour pinkish buff, very finely and fairly thickly speckled rufous and light chestnut all over, with a few bold or smeared spots of rich chestnut, on underlying purplish slate, pale purplish grey and faint grey—all underlying markings rather sparse; size 53.3 x 37.1, 53.0 x 37.5, 53.5 x 37.3mm. Wedekind ate these eggs, and reported them as delicious.

Porphyrio alleni Thompson.

Wedekind took one slightly incubated egg from a C/4 at Msweba, 1st March, 1953 (shown in the Check List as egg-laying near Mumbwa in February), smooth and slightly glossed, cream ground, uniformly marked all over with small spots of rufous chestnut on underlying similar spots of various light shades of grey; size 33.3 x 24.2mm.

Gallinula chloropus meridionalis (Brehm).

Wedekind took two fresh eggs each from a C/3 and a C/5 at Msweba, 1st March, 1953. One of these records was shown in the Check List as egg-laying near Mumbwa in March. The eggs are typical in colour; size 43.4 x 29.8, 39.6 x 30.0, 44.3 x 30.5, 44.3 x 30.3mm.

(*to be continued*)

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

20th January.

FREE COPIES

Contributors who desire free copies of the Bulletin containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Twenty-one Shillings Annually. Two Shillings and Sixpence per copy.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent.

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PURCHASED
-4 FEB 1959

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 2

February
1959

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

Volume 79
Number 2
Published: 2nd February, 1959

PURCHASED
1 Feb 1959

The five hundred and seventieth meeting of the Club was held at the Rembrandt Hotel, S.W.7 on Tuesday, 20th January, 1959, following a dinner at 6.45 p.m.

Chairman: CAPTAIN C. R. S. PITMAN

Members present, 20; Guests, 2; Guest of the Club, Mr. A. C. Townsend; Total, 23.

Early Drawings and Paintings of Natural History

Mr. A. C. Townsend, Librarian to the British Museum (Natural History) gave an enthusiastic and learned talk, illustrated by coloured slides made from material in the library of the museum. Commencing with the botanical illustrations of Diascorides in A.D.512, botanists appeared to be the pioneers of natural history illustration and it was not until the appearance of Pierre Belon's "Des Oiseaux" in 1555 that the first book dealing solely with birds was produced. This, Mr. Townsend considered to be one of the finest books in his care.

He then traced the development of art in natural history illustration up to the famous bird artists of the 19th and early 20th Centuries—Millais, Lodge, Gould and Thorburn to mention only a few. Audubon's "Birds of America" was in his opinion the finest bird atlas that has ever been published and it is often forgotten that it was largely a British production—the work of Havel in London. Artists have not been attracted to mammals in the same way as birds, with the notable exceptions of Thorburn, who was equally brilliant with both birds and mammals. In closing an unusual and interesting evening, the speaker said he hoped that the new library accommodation in the museum would allow more space for temporary exhibitions.

Further Breeding Records from Northern Rhodesia

Part III

by Mr. C. W. Benson and Captain Charles R. S. Pitman

Received 15th July, 1958

Gallinula angulata Sundevall.

Wedekind took two fresh eggs from a C/3 at Msweba, 3rd March, 1953 (shown in the Check List as egg-laying near Mumbwa in March). These are smooth, slightly glossed, ground more buffy cream than in those of *G.chloropus*; very finely speckled all over with various shades of pale rufous and light chestnut, with a few of the small blotches and large bold spots of dark chestnut, mainly at large end, so typical of *G.angulata*, on a few underlying spots of dull grey and slate; size 33.5 x 25.0, 34.0 x 26.0mm

Wedekind reports that the nests of this species and *G.chloropus* differed from those of *Porphyrio* spp. in not having the *tips* of the surrounding grass bent over as a covering.

Grus carunculatus (Gmelin).

Reference Ansell's record in the Check List of two young about fledged, 10th November (1955), these were in fact in no way connected, and one was slightly more developed than the other. Both were still under parental care. On 15th August, 1957 he found a young bird still in down, quite unable to fly, in the Kasempa sector of the Kafue National Park, and gives another such record for 13th June, 1951 (in the latter case the bird was still at its nest). On 9th June, 1957, on the Musa River, Uys found a well grown young, but not yet able to fly, with its parents. Carr and Uys found a nest containing a single egg near Ngoma at 15°54′S., 25°58′E., on 4th May, 1958. On 29th May, merely the empty shell was found.

Otis denhami jacksoni (Bannerman).

Shenton saw a young one only about two-thirds grown, though able to fly well, on the Nyika Plateau, 2nd June, 1958.

Charadrius pecuarius pecuarius (Temminck).

Coll. C/2 moderately incubated, typical, with the female parent, on a sandy ridge near the Zambesi River at 27°48′E., 22nd November, 1957 (C.W.B.).

Glareola pratincola fülleborni Neumann.

Coll. C/2 moderately incubated, typical, Zambesi near Chirundu, 28th November, 1957 (C.W.B.). The eggs were on a beach of sand and shingle, and surprisingly conspicuous in this unusual environment.

Glareola nuchalis nuchalis (Gray).

Coll. C/2 fresh, Kafue River at 14°44′S., 26°19′E., 27th October, 1957 (Carr). Eggs typical, from bare rocks in rapids on river, no semblance of a nest.

Burhinus vermiculatus vermiculatus (Cabanis).

Coll. C/2 fresh, near Namwala, 14th August, 1957 (Uys); C/2 slightly incubated, Kafue River at 14°29′S., 26°37′E., 16th September, 1957 (Wedekind). Both clutches typical.

Mitchell saw C/2 on the Zambesi, five miles below the Victoria Falls, 6th September, 1957, and two young less than ten days old above the Falls, 25th October, 1957, while Took records C/2 from the Kafue/Zambesi Confluence, 15th October, 1954.

Turnix nana luciana Stoneham.

Coll. C/3 fresh, with male parent (snared on eggs), Chitunta Plain, 25th October, 1957. The eggs were on the ground, in open short grassland, in the shelter of a small 1ft. high shrub, with no semblance of a nest. They are smooth, slightly glossy; ground pale, dull creamy, very finely but thickly speckled all over with light and bright brown, on underlying spots and blotches of grey and slate-grey; size 22.0 x 17.1, 22.0 x 17.2, 20.5 x 17.0mm. Except that they are slightly smaller, these eggs are not so readily distinguishable from those of *T.sylvatica lepurana* (Smith) as the ones collected in Kenya by Stoneham (see *Oologists*' *Record*, March 1932, pp.14–16).

Another male of *T.n.luciana* was collected at Kasusu, 16°50′S., 26°18′E., 9th January, 1958. It had testes measuring 6 x 5, 9 x 3mm. A female obtained at Chilanga, 18th January, 1958 contained an oocyte of diameter 3mm., and the oviduct was distended. The stomach-contents of these specimens were small seeds and grit.

Centropus toulou grillii Hartlaub.

Coll. C/2 dead fresh, Msweba, 4th March, 1955 (Wedekind, recorded in Check List from near Mumbwa). Eggs white, rather rounded, smooth, very slightly glossed; size 28.5 x 25.0, 27.6 x 24.1mm.

Centropus cupreicaudus Reichenow.

Coll. C/4 fresh (two broken) from dense reeds by the Kafue River at 14°25′S., 26°58′E., 20th January, 1958 (Wedekind). Eggs typical, smooth, but not glossy, and with dull patches; size 37.3 x 26.0, 38.1 x 27.7mm.

Centropus senegalensis flecki Reichenow.

C/2 dead fresh, Msweba, 20th January, 1950 (Wedekind, recorded in Check List from near Mumbwa). Nest on dry ground in a *Bauhinia* bush. Eggs white, smooth, nest stained, slightly glossed; size 32.3 x 26.3, 34.2 x 26.4mm.

Ceryle maxima maxima (Pallas).

Coll. C/4 slightly incubated, Kafue River at 14°29′S., 26°37′E., 16th September, 1957 (Wedekind). From a horizontal tunnel about 4ft. long, enlarged at the end. Eggs white, smooth, slight gloss, one less glossed than the others; size 41.0 x 33.5, 42.0 x 34.3, 40.7 x 33.2, 42.0 x 34.1mm.

Merops boehmi Reichenow.

Coll. C/4 slightly incubated, Kafue River at 14°29′S., 26°37′E., 17th September, 1957 (Wedekind). From sandy soil on an island of about 10 acres, fringed with evergreen growth and reeds alternating. The nesting tunnel slanted into the ground for some 3 feet, but the end was only about 5 inches below the surface of the ground. Eggs white, oval, smooth, slightly glossy; size 18.6 x 15.7, 19.4 x 15.2, 19.5 x 16.0, 19.0 x 15.6mm.

Asio capensis capensis (Smith).

Mitchell found two adults with five young only just able to fly, similar to the adults in colour, though with a little down still adhering, on Lochinvar Ranch, 4th July, 1956. He also found a nest with two eggs (not taken) in this locality, 20th May, 1957. In April, he has several times seen birds quartering some 10 feet above the ground, even as long as half-an-hour before sunset, and uttering a frog-like croak.

Otus leucotis granti (Kollibay).

Wedekind took one fresh egg from a C/3 at Msweba, 20th July, 1955. This is white, rounded, fairly glossy; size 39.0 x 34.0mm. It was from a shallow, open hole in a tree, some 15 feet above the ground, in *Brachystegia* woodland.

Scotopelia peli (Bonaparte).

Mitchell found a nest containing four young at Kazungula, on the banks of the Zambesi, on 31st July, 1958. An old Hammerkop's nest in a *Diospiros* tree had been utilised. There were four young, all of markedly different size, the largest being about ten days old. They were clad in greyish white down.

Caprimulgus tristigma lentiginosus Smith.

Coll. C/2 fresh, Nyika Plateau, 26th September, 1956 (C.W.B., recorded in Check List). The incubating parent, on bare grey rock, was most inconspicuous, but the uncovered eggs were readily visible. They were typical elongate, rather narrow and somewhat oblate ovals; white, boldly spotted and marbled light brown on underlying grey and pale grey all over, but profusely on the larger egg; size 32.8 x 21.1, 32.2 x 20.3mm.

Apaloderma narina narina (Stephens).

A single nestling was collected on the Lisombo Stream, Mwinilunga District, at 11°15′S., 24°05′E., 16th October, 1957, from a hole in a tree, some 30 feet above the ground, in evergreen forest. Up to the point of the hole the tree was of practically uniform diameter of about 6 inches. It then divided into two much narrower branches both continuing, almost vertically for another 10 feet. The hole was of depth 18 inches, into which a hand could just be inserted. At the bottom there was merely a little earth, a few dried leaves, and one half-eaten hawk-moth. The nestling has wing 78, tail 37mm. only. It differs from adults in colour in having the green of the upperside slightly tinged with coppery, with buffy subterminal spots on the inner secondaries and wing-coverts. The underside is fulvous, mottled with sepia, most markedly on the chest, with the lower abdomen and flanks thereto practically plain white. Bill white, yellowish towards base; tarsi and feet white. Stomach-contents wax, also remains of the wing and mouth-parts of a bee and other chitinous material.

Turdoides leucopygia hartlaubii (Bocage).

Coll. C/3 fresh, Kafue River at 14°25′S., 26°58′E., 15th October, 1956 (Wedekind). Nest in tall reeds flanking the river, 6 feet above water-level. Eggs typical, bright blue, smooth, slightly glossy; size 27.2 x 19.0, 26.1 x 18.4, 27.0 x 19.0mm. A C/3, moderately incubated, very similar but with little gloss; size 26.1 x 18.6, 26.3 x 19.3, 26.4 x 19.3mm.; taken by C. W. B. at Kasusu, 16°50′S., 26°18′E., 10th January, 1958. Nest in a thorn bush 6ft. high, in a dambo.

Cercomela familiaris modesta (Shelley).

Coll. C/3 heavily incubated, Kafue Gorge, 15°48′S., 28°24′E., 4th November, 1957 (C.W.B.). Nest a cup under a stone on rocky ground. Eggs bright turquoise, smooth, with little gloss, sparingly and finely spotted all over with rufous, boldly girdled around large end with rich rufous blotches, with blotches of purplish slate, lilac and lavender mainly underlying girdle; size 18.4 x 14.3, 19.2 x 14.3, 19.1 x 14.2mm. The breeding record in the Check List for the Chishimba Falls, October, refers to three young only just hatched in the underside of the roof of a grass shelter built on rocky ground for visitors to the Falls, 28th October, 1956.

Cisticola woosnami lufira Lynes.

Coll. C/3 slightly incubated, with female parent, Kasama, 23rd January, 1957 (C.W.B., abbreviated in Appendix 4 to Check List). Nest adjacent to ground, in *Brachystegia* woodland. Eggs white, fairly glossy, finely and sparingly spotted and speckled chocolate, mainly around larger end, on a few underlying spots of pale purplish slate; size 15.8 x 12.2, 15.7 x 12.3, 15.4 x 12.3mm.

Cisticola robusta awemba Lynes.

Coll. C/2 fresh with female parent showing no more eggs to lay, Kasama, 11th January, 1957. Nest in a short-grassed, waterlogged dambo, at base of a tuft of grass, practically on the ground. Eggs immaculate white and rather glossy; size 18.4 x 13. 6, 18.1 x 13.5mm. A similar nest was found in the same locality on the same date, containing one moderately incubated egg and one addled, both white and fairly glossy; size 17.9 x 13.3, 17.3 x 13.0mm. Both these records are by C.W.B., and abbreviated in Appendix 4 to the Check List.

Hirundo griseopyga griseopyga Sundevall.

Coll. C/5 fresh, Iyeshya, 15°48′S., 26°12′E., 1st September, 1957 (Uys). Eggs typical, but note the large clutch-size. Nest made of fine grass, in a disused burrow extending for about 1ft. below the ground. Uys dug up a similar nesting hole on the Kafue Flats 15 miles above Namwala, 27th August, 1957. It contained four young almost fledged and an addled egg. Also, Liversidge examined four young about one week old near Ngoma, 15°54′S., 25°58′E., 26th July, 1957, and heard young cheeping in another hole (same locality and date). At Lochinvar, 27th July, 1957, a pair were seen bringing grass to a nesting hole (C.W.B.).

Lagonosticta jamesoni jamesoni Shelley.

A male parent collected at its nest at Chipongwe, 15°38′S., 28°18′E., 13th April, 1958. There were four eggs soon to hatch, and one addled, none of which were retained.

Analagous Variation in Mallard and its possible Significance

by Dr. James M. Harrison

Received 10th October, 1958

In previous communications I have had, in association with Dr. Jeffery G. Harrison, occasion to refer to various characters occurring in the genus *Anas* and have advanced certain hypotheses in explanation of these. The acceptance of such instances as reversionary phenomena seems irresistable, particularly when one recollects that this kind of reversion to an ancestral type was clearly demonstrated by direct breeding experiments by Darwin[1] in 1872 in the case of pigeon, when by breeding back from the most divergent varieties produced by selection by man, he succeeded in arriving at birds completely agreeing in their characters with the Rock-Dove, *Columba livia* Gmelin, so that on this basis alone reversion to an ancestral type is indisputable and proven. Without resorting to quoting numerous relevant cases it will suffice to instance the remarkable hybrid progeny of the Teal, *Anas crecca crecca* Linnaeus and the Shoveler *Anas clypeata* Linnaeus which very closely resembles the drake Baikal Teal *Anas formosa* Georgi (*antea* 1953)[2].

The present case concerns this type of phenomenon in the Mallard, *Anas platyrhynchos platyrhynchos* Linnaeus. On 10th September, 1958, a bird of this species still in the "flapper" stage, was captured at Sevenoaks. It was collected since it presented certain interesting characters not usually seen in this species. The specimen is in most respects a normally dark coloured young female and still has traces of the two pale greyish white patches on either side of the rump.

The unusual features which this bird exhibits are (1) symmetrical albinism of both manus segments of the wings, concerning which I have a communication in course of preparation, (2) a small white triangular marking at the root of the neck anteriorly, (3) a whitish chin and throat and sides of the face at the bases of the lower mandible and, (4) a distinct pale spot at the base of the upper mandible on either side, while it should be noted that above the white triangular marking at the root of the neck and extending somewhat upwards on the sides of the neck and face, the bird is of a very pale cinnamon colour, which is to be regarded as a degree of erythrism.

I do not intend to discuss in this communication the first three characters, nor the associated erythrism as these will be more fully dealt with in a subsequent paper, but some comment will be made concerning the fourth anomalous character, *i.e.* the bill spot. It can here be stated however with regard to the first three characters that they are not confined to immature birds, for they are present in an adult female taken on the same water in April 1958. This individual shows the same symmetrical albinism of the wings, a condition which also affects the facial pattern, though in this case the albinism is not symmetrical being present only on the left side. It will be seen from the accompanying plate that the distribution of the white is situated in the same locus as the bridled pattern in *A. formosa.* Although not so apparent as in the immature individual there is nevertheless an indication of pallor in that position where the bill spot is found in *A. formosa*, in the female constantly and in the male when in the eclipse dress, a circumstance which in the writer's opinion suggests that this character is one of long standing in this species and also expresses significantly that *A.formosa* and *A.platyrhyhchos* stand in close phylogenetic relationship to one another.

As a further deduction it would seem most probable that since a bill spot is found in a number of other duck species, *e.g.* in the "dabbling" duck, in *A.crecca*, *A.c.carolinensis* Gmelin, and in *A.c.nimia* Friedmann in both the ducks and drakes in eclipse, this character is one of great age, while this opinion also finds confirmation in view of the fact that a bill spot is found in other genera than *Anas*, significantly in the Greater Brazilian Teal, *Amazonetta braziliensis braziliensis* (Gmelin) and the Lesser Brazilian Teal, *A.b.ipecutiri* Vieillot. A bill spot is of course found in other genera than the "dabbling" ducks, *e.g.* in *Bucephala clangula clangula* (Linnaeus) and in *B.c.americana* (Bonaparte). It is also found in the *Oxyurini*, in the species *Thalasornis leuconotus leuconotus* Eyton, the African White-backed Duck, and in the closely related Madagascan White-backed Duck *T.l. insularis* Richmond. Remembering the experimental work by Darwin, referred to above on back breeding from the most diversified varieties of the domestic pigeon to *Columba livia*, one can readily accept on the same principle the ancestral origin of characters such as the bill spot and the bridled facial pattern occurring in many widely divergent forms of the *Anatidae.* Bridling as seen in *A.formosa* can be recognised, as already stated above, as occurring with or without hybridisation and indications may be seen of this character in the following species, Teal, *A.crecca*, Mallard, *A.platyrhynchos*, and in the drake of the North American Wood-Duck, *Aix sponsa* (Linnaeus). Where these traces of an ancestral pattern recur in the absence of overt hybridisation I have suggested a term, "autophoric reverse mutation" as being suitable, while for instances of characters recurring in individuals of known hybrid constitution, it is suggested that "heterophoric reverse mutation" indicates the origin of the phenomenon. The most striking instance of the latter, as already mentioned, was afforded by the hybrid progeny of the pair of duck, of which the male parent was a Teal, *A.crecca crecca* and the female a Shoveler, *A.clypeata*, one of the offspring of which so closely resembled a drake *A.formosa* that it could easily have been mistaken for that species. This individual was bred and reared in captivity by Major W. H. Payn, (*vide antea* 1953)[2]. In this specimen the facial markings are almost identically the same as in the full plumaged drake of the Baikal Teal in the bridling. This bridling is of course a very characteristic feature of *A* *formosa* in full plumage, while as I have shown in a recent paper (1958)[3], it is also found in about 15% of the ducks of this species. It is also apparent as a pale marking, almost white in the drakes in eclipse dress. We must now consider the characters presented by the young Mallard in the light of these facts, and see what deductions are possible as a result.

If one assumes that the Mallard is, as it were, the prototype of the *Anatidae* then one would expect to find Mallard characters occurring strongly in other duck species, the result of the reversional phenomena already described, but this is only so to a limited extent. It is true of course that the triangular neck spot in the Teal, *A.crecca* can be regarded as an analogous reversionary character originating from *A.platyrhynchos*, and the same interpretation can be advanced in explanation of the neck ring found in some individuals of the Gadwall, *A.strepera* Linnaeus. Comments upon the white neck spot in *A.crecca* and in the closely related *A.flavirostris* Vieillot have been made in a recent paper (*vide* J.M.H., J.G.H., *antea* 1958, 78,104,105)[4] and in another in this issue.

We have already seen however that as a result of hybridisation and, in some cases even without the influence of this genetic mechanism individuals arise from time to time presenting a type of discontinuous variation towards the characters found in the Baikal Teal, *A.formosa*. In view of the more widespread distribution of these it would seem to me more probable that this latter species must antedate *A.playtrhynchos* in antiquity, and on the same reasoning that *A.platyrhynchos* antedates *A.strepera* and *A.crecca*.

I can conceive instances of discontinuous variation which in their characters, both in respect of colour and pattern, resemble no known living species, and from which one cannot deduce any affinity towards any particular species. I can also appreciate that type of discontinuous variation in which it is possible to deduce from the morphological characters presented an affinity towards one or more species. I find it difficult however to conceive a discontinuous variation resulting from a process working in the opposite direction to that of a reversion, and yet producing in an individual characters resembling another species or race; in other words the genes must be passed down, *i.e.* inherited by subsequent generations to bring about such striking mutations resembling other species or races. It is to my mind most unlikely, indeed almost inconceivable, that other circumstances than those of inheritance could possibly account for such manifestations.

It is on these considerations that I would regard *A.formosa* as of greater antiquity than *A.platyrhynchos* in the phylogeny of the genus *Anas*.

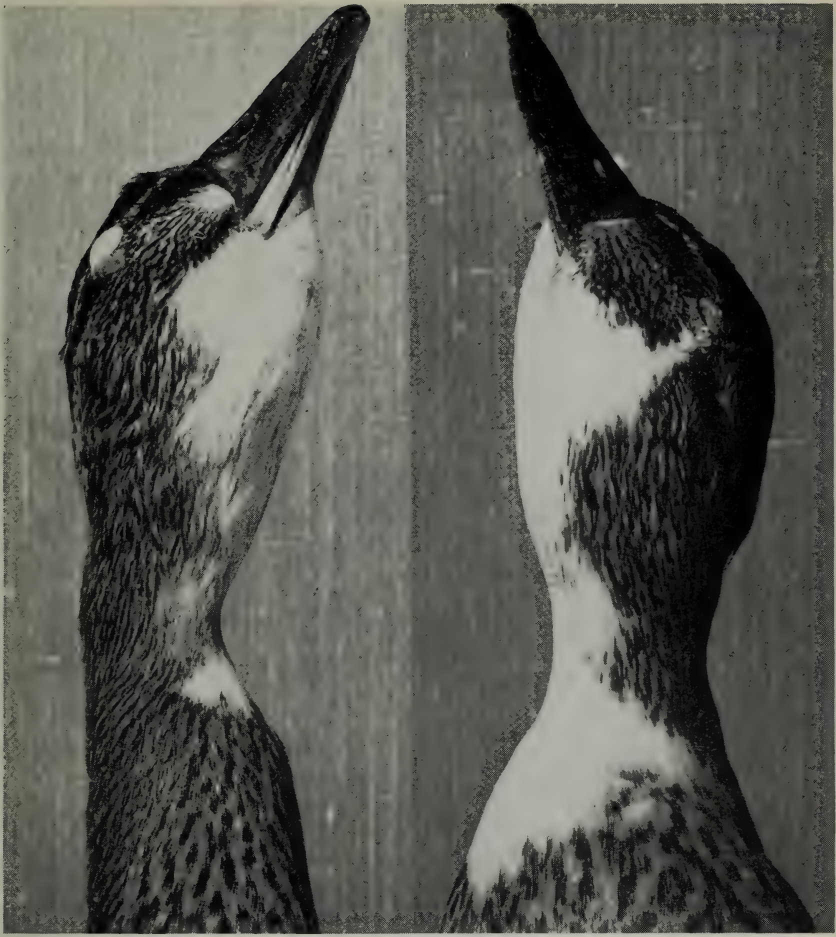
References:

[1] Darwin, Charles, 1872, reprinted 1956, The Origin of Species, *Variation under Domestication*, 19–28.

[2] Harrison, James M., 1953, *On the Significance of Variations of Pattern in Birds.* Bull. B.O.C., 73, 37–39.

[3] Harrison, James M., 1958, *The Baikal Teal in the British Isles, a New Record and a Note on the Incidence of the "Bridled" Face Pattern.* Bull. B.O.C., 78, 105–106.

[4] Harrison James M., and Harrison, Jeffery G., 1958, *The White Neck-Spot Variation in the European Green-winged Teal and the Yellow-billed Teal.* Bull. B.O.C., 78, 104–105.



Variant Mallard.

Left: immature female, September 1958. *Right:* adult female, April 1958.

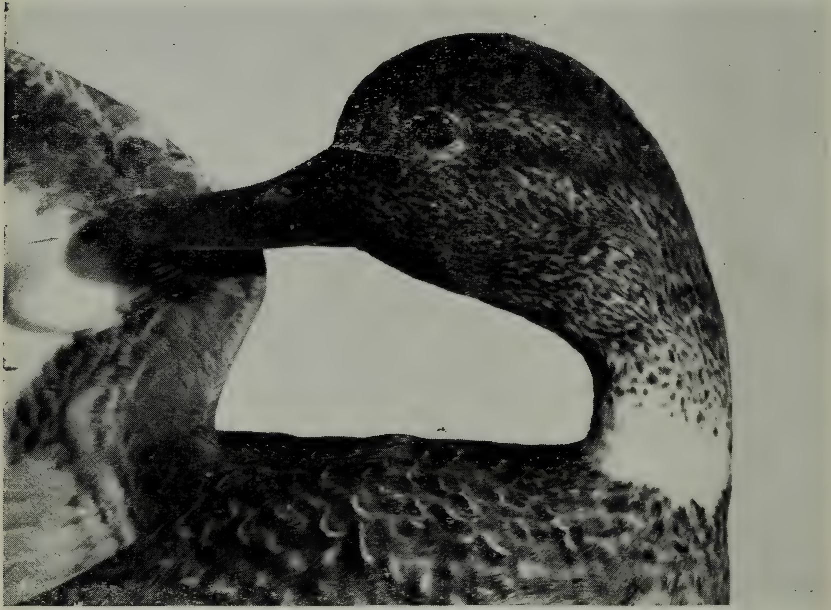
Further Remarks on the White Neck-Spot Variant in the European Green-winged Teal

by Dr. James M. Harrison and Dr. Jeffery G. Harrison

Received 20th October, 1958

In a previous paper[1] we reviewed examples of the white neck-spot variant in the European Green-winged Teal, *Anas crecca crecca* Linnaeus, and the Yellow-billed Teal, *Anas flavirostris flavirostris* Vieillot, and we concluded that this represents an ancestral character common to both of these closely related species, possibly also indicating a reversion towards the white neck-ring, as seen typically in the Mallard, *Anas platyrhynchos platyrhynchos* Linnaeus.

To the list of known examples we now have to add another most marked one in an eclipse drake European Green-winged Teal shot on Cottington Marsh, near Deal, Kent on 27th August, 1936. The bird was mounted by Mr. Guy Mannering and has now been presented by him to the Maidstone Museum. We are grateful to Mr. Eric Philp, ornithologist to the Museum for allowing us to examine and photograph the bird. Although in eclipse, it is possible to ascertain that the spot is in the identical position as in the other six examples, for in eclipse plumage there is a distinct division between the fine brown speckling of the neck and the subdued barring of the upper breast. The spot lies anteriorly in the mid-line of the neck. It is much larger than in any other specimen we have seen, tending like all the others to be triangular in shape within the speckled area, the base forming a clear dividing line between the lower neck and upper breast. The base in this example measures 40 mm. and from apex to base is 16 mm.



The white neck spot in an eclipse drake Teal.

Following our paper, we have heard from Mr. Peter Scott on the subject and have his permission to publish his observations, which are of much interest. ''I think the Mallards' neck ring is very likely to be analagous. Incidently, the Pintail also has a white neck ring which shows at certain stages of the eclipse (and is also shown by the most extreme plumage of the Kerguelan Pintail. See Delacour's ''*Waterfowl of the World*'' Vol. 2, plate XIV.) The extreme male of the New Zealand Brown Duck also shows it. The bird I regard as archaic, having been under reduced selective pressure in New Zealand (no mammals, few birds of prey) and probably not very far from the common ancestor of Mallard and Pintail—as it has many characters of both.

"Baikal and Falcated both show white neck rings, so perhaps does Bronze-wing—but Shoveler is more doubtful. However I feel sure that the Torrent Ducks' dividing line has to do with it, even though it is broken in front in the southern races. I believe there are other common plumage patterns which could give us clues to the path of evolution—bridled face patterns—undertail coverts—speculum—perhaps scapulars (although these seem much less conservative.)"

The photograph of the eclipse drake Teal shows the white neck spot and the decided tendency towards a white neck-ring.

Reference:

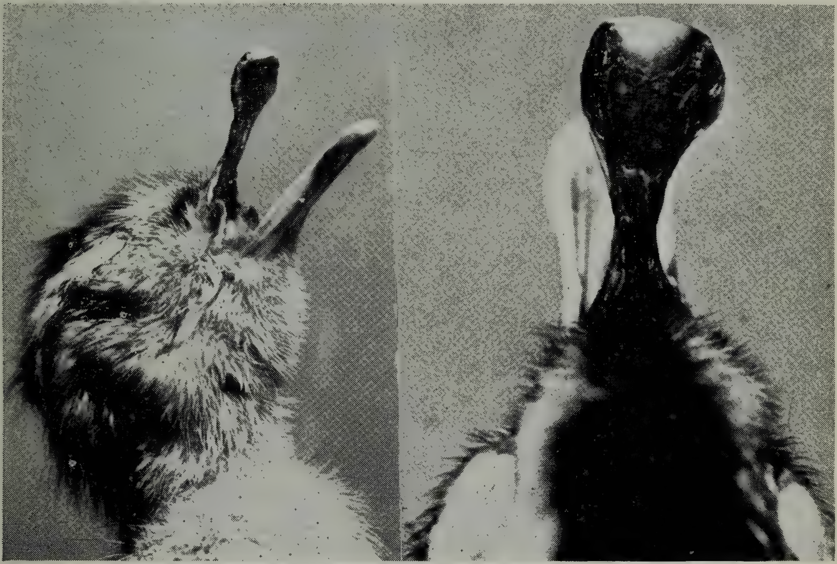
[1] Harrison, James M. and Jeffery G. "*The White Neck Spot Variant in the European Green-winged Teal and the Yellow-billed Teal*" Bull. B.O.C., Vol. 78, pp.104–5. 1958.

Congenital "spoon-billed" deformities in Cinnamon Teal

by Dr. Jeffery G. Harrison

Received 18th October, 1958

In July 1958 I received from Dr. Edmund Gleadow a downy young Cinnamon Teal, *Anas cyanoptera cyanoptera* Vieillot, which had died after 24 hours with a most interesting "spoon-billed" deformity of its upper mandible, as can be seen from the photographs. The deformity appears due to a primary failure of the premaxilla to develope. The outer horny layer has followed the line of deformity, but is otherwise normal, and the lower mandible is also normal. Death in this case could not have been due



Cinnamon Teal with "spoon-billed" deformity.

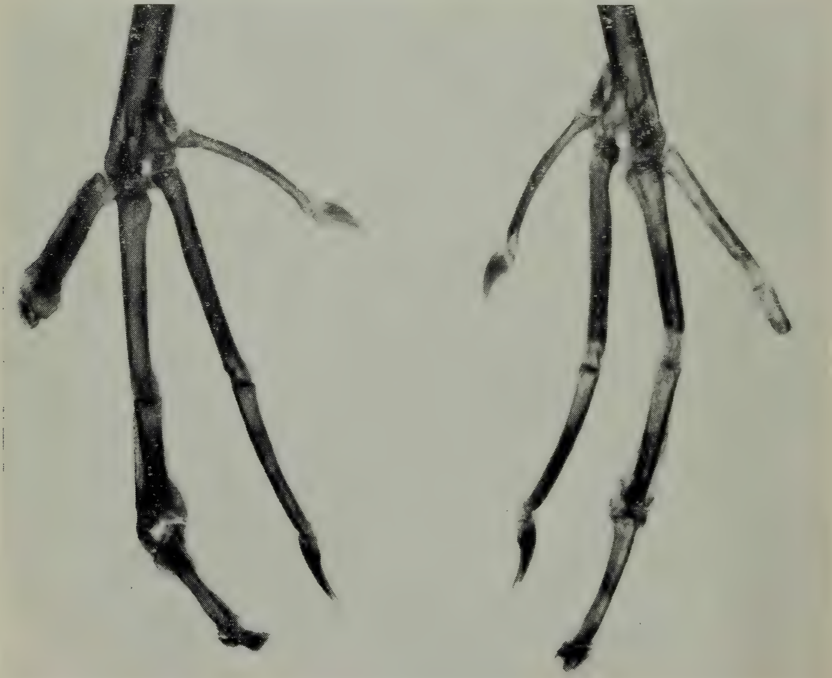
to the deformity as it occurred too soon after death. It is possible that other internal abnormalities were present, although they could not be detected when the specimen was preserved. It is now in my collection.

Dr. Gleadow tells me that this is the second such case that he has had in Cinnamon Teal, the first being in 1957 and it lived for 80 hours. Mr. E. O. Squire of St. Neots, Huntingdonshire has also bred two Cinnamon Teal with identical deformities, one of which was seen by Dr. Gleadow. Bill deformities other than by injury appear rare in wildfowl. Mr. Pomeroy, who is working on the whole subject tells me that he has only traced one. This was in a young Red-crested Pochard, *Netta rufina* (Pallas), in which the upper mandible gradually became uptilted over a period of some months. No doubt there are others which have not been put on record, but the fact that these four identical deformities should have occurred in recent years in the one species must be of some significance, and suggests the possibility of in-breeding among the captivity stock in this country. Now that so many species of wildfowl are being kept in captivity, there seems to be scope for a more extensive study of these congenital deformities.

Loss of Toes in a Moorhen due to Tuberculosis

by Dr. Jeffery G. Harrison and Dr. Hugh Hay

On 5th March, 1958 a dead Moorhen, *Gallinula chloropus* Linnaeus, was found lying under telegraph wires beside the Ouse Washes near



X-ray Photograph of Moorhen's feet deformed with Tuberculosis.

Welney, Cambridgeshire. The bird had died of a fractured skull, presumably from flying into the wires. Its body was otherwise in good condition.

The bird was found to have very curious deformities of the feet. The two outer toes were both partly missing from a point just distal to the first interphalangeal joint, while the remainder of the right outer toe was considerably thickened. The two central toes were also damaged, the left one having the claw missing and the second interphalangeal joint thickened, but still able to be moved. The right central toe had the claw twisted and both the third and fourth inter-phalangeal joints thickened and functionless. The remarkable feature was the symmetrical distribution of the damage.

The bird was preserved and when dry, routine X-Ray photographs were taken followed by the method of macroradiology, using the special apparatus at Messrs. Ilford's Ltd. The resulting pictures were striking and showed a degenerative proliferative arthritis, the proliferation extending along the shafts of the phalangeal bones. With these findings, we had to consider whether the phalanges which were missing had degenerated or were lost through trauma. The appearance was rather like a Charcot's Disease in the human, or a tuberculous infection.

Accordingly, through the kindness of D. Keith Randall, material from one of the swollen joints was ground up and a smear made, which was stained by the Zeihl-Neilsen technique. This revealed very large numbers of acid-alcohol fast bacilli and a culture was set up on Finlayson's medium. On this, *Mycobacterium tuberculosis* was grown in about three weeks. This had all the characteristics of the avian strain, but unfortunately the culture became contaminated and efforts to remove the contaminants failed, so that typing was not possible.

This provides a remarkable proof of the resistance of the tubercule bacillus, which in this case had remained alive in the dried up toe for 117 days from the time when the bird was found dead until the culture was set up. It also provides another cause for deformities in birds feet, which have been considered by Harrison and Pitman.

We are most grateful to Dr. Keith Randall, Consulting Pathologist and to Mr. Heather, Senior Laboratory Technician for their help in working out this interesting case.

References:

[1] Harrison, James M. "*Fish and other Aquatic Fauna as Predators of Birds.* Bull. B.O.C., Vol.75, p.110. 1955.

[2] Pitman, Captain C.R.S. "*Further Notes on Aquatic Predators of Birds.*" Bull. B.O.C., Vol. 77, p. 89. 1957.

Additional data on a rare colour aberration in certain species of the genus *Larus* Linnaeus

by MR. BRYAN L. SAGE

Received 15th October, 1958

As a result of the publication of my original note on this subject (Sage 1958) a certain amount of additional data has come to hand which it is desirable to place on record herein.

Lesser Black-backed Gull
Larus fuscus Linnaeus

Additional evidence regarding the occurrence of this aberration in Western Europe is given by Goethe (1957) who states that an individual with symmetrical albinism of the primaries occurred amongst a breeding colony of *Larus fuscus fuscus* L. on Memmert. The extensive white patches on this bird extended, so far as could be ascertained, from the proximal ends of the greater wing coverts and thence on to the primaries. An example with white patches in the carpal region had been seen in this locality in May 1952, but it is not considered that the two records refer to the same individual. A sketch of the upperparts of the latter bird is reproduced as Figure 6 in Goethe's paper, and this shows clearly the typical lozenge-shaped white patch on the primary coverts of each wing. Whilst on the Fishing Research Vessel "Anton Dohrn" 12 sea miles north-east of the coast of Kent on 14th March, 1955, Goethe saw a Lesser Black-backed Gull, considered to be either *L. f. fuscus* or *Larus fuscus intermedius* Schiøler, which also had white wing patches. In this paper Goethe goes on to say that "Since partial albinism is regarded as resulting from degeneration from inbreeding, one may assume that the example on Memmert was due to a similar cause . . .". This cannot, of course, be accepted as the explanation of this particular aberration. One cannot reasonably postulate that a plumage variation of this nature, occurring as it does in a stable form in at least five species and races of *Laridae* in an area extending from Western Europe to the west coast of America, is due to partial albinism induced by inbreeding.

Mr. Ian F. Stewart informs me (*in litt* 13.vi.58.) that in June 1958 whilst on the Isle of May he saw a *Larus fuscus graellsii* Brehm with the primary coverts of each wing white. A further search disclosed three more individuals with varying amounts of white on the primary coverts. It is understood that an individual of this type was seen on the island in 1956.

This aberration is now known to occur in at least four breeding colonies of this species on the west coast of Great Britain, *i.e.* Lundy Island, Steep Holm, Skokholm, and the Isle of May. There is an interesting field of study here, and valuable information on the genetics of this aberration could be obtained by careful field work, particularly ringing, at these colonies. It would be of interest to know the percentage of aberrant individuals at each locality in relation to the size of each breeding colony. The occurrence of this aberration in other breeding colonies should be looked for.

Mr. R. S. R. Fitter (*in litt* 12.v.58.) states that whilst on the Mersey at Liverpool on 29th May, 1947, he saw an immature *argentatus/fuscus* gull with a white patch on each wing "very similar to a Great Skua (*Catharacta skua* Brünnich.)". Mr. Fitter's remark raises the interesting question of the relationship of the gulls and skuas, which undoubtedly had a common origin. Howard (1950) gives evidence which suggests that the waders and gulls diverged in the Oligocene period, and that the gulls, terns and skuas diverged in the Miocene. It is interesting to speculate on the possibility of the aberration under discussion having been a normal plumage character of the Miocene ancestor from which the three groups evolved.

Greater Black-backed Gull
Larus marinus Linnaeus

The occurrence of this aberration in the adult and immature plumages of this species has already been recorded in this journal, (Jones 1958).

Western Gull
Larus occidentalis

The occurrence of this, or an extremely similar aberration, in this American species has been recorded (Hubbs 1954). Over a period of time a number of Western Gulls with white patches on the upper surface of the wings near the leading edge were seen in the vicinity of San Diego, California. On 11th December, 1953, Professor Hubbs had close views of an adult with these white patches, and a field sketch of this bird is reproduced in his paper.

The observations given above, together with those previously published, are proof enough that this aberration must be of great antiquity and of phylogenetic significance.

Acknowledgements

I am indebted to Professor Carl L. Hubbs of the University of California for sending me a reprint of his paper. Dr. Friedrich Goethe kindly sent me a reprint of his interesting paper, and for translating the relevant part of this I must thank Dr. James M. Harrison of Sevenoaks.

References:
Goethe, Friedrich., (1957) "Die Westliche Heringsmöwe als Brutvogel auf Memmert und anderen deutschen Inseln" *Beitrage zur Naturkunde Niedersachsens* 10(3):49–60.
Howard, H., (1950) "Fossil evidence of avian evolution" *Ibis* 92: 1–21.
Hubbs, Carl L., (1954) "Western Gull with Symmetrical Wing Patches" *Condor* 65:228.
Jones, David., (1958) "On a Rare Colour Aberration in the Greater Black-backed Gull" *Bull. B.O.C.* 78: 87–88.
Sage, Bryan L., (1958) "On a Rare Colour Aberration in Certain Species of the Genus *Larus* Linnaeus" *Bull. B.O.C.* 78: 71–73.

Notes on a Collection of Birds made in Iraq by Flight Lieutenant David L. Harrison

Part II

by DR. JAMES M. HARRISON

Received 10th August, 1958

STRIATED SCOPS OWL *Otus brucei* (Hume)

All authors are agreed that this owl is, if not actually abundant, at any rate sufficiently common. Moore and Boswell (*loc.cit.*)[2] however do not appear to have identified the species with certainty. An adult female was collected at Habbaniya on 29th September 1954.

EAGLE-OWL *Bubo bubo interpositus* ≷ *ascalaphus*

A single specimen was collected by Dr. Pamela Harrison on 17th October 1954 near Samarra. The bird is a female and was one of two seen. On comparison the specimen shows intermediacy between *B.b.interpositus* Rothschild and Hartert and *B.b.ascalaphus* Savigny, in that it is of a somewhat buffy-pink tone, while when compared with *B.b.ruthenus* Zitkov and Buturlin, it is decidedly less grey and also paler. Eagle-Owls generally show a high degree of variability and added to this there is also without any doubt considerable intergradation occasioned by the rather nomadic habits of the species. The difficulty of the delimitation of the geographical forms of *Bubo bubo* is stressed by the Russian workers (*vide The Birds of the U.S.S.R.*, I, 352–354). The generally palish colouration of the Iraq specimen is indicative of its close affinity with the *ascalaphus—desertorum*, or southerly group of the species, the connecting link between this group and the populations to the north and west, *i.e.* the nominate form, being the greyer and darker *B.b.ruthenus*.

Measurements: w.= 390mm. b.= 48mm. t.= 73mm. tl.= 225mm.

LITTLE OWL *Athene noctua bactriana* Blyth

It is apparent when reading the late Dr. C. B. Ticehurst's[3] comments upon this species in the *Survey of Iraq Fauna* that Little Owls are sufficiently variable to have created taxonomic difficulties, a view which has been confirmed by subsequent workers. Examination of material from Middle Eastern countries reveals much colour variation and also a good deal of variation in so far as the feathering of the tarsi and toes is concerned.

Here again, as in *Bubo bubo* there is doubtless some intergradation of forms which tends to make the whole of the southern group —*saharae-glaux-bactriana* a complex with a good deal of overlapping of characters. That the overall pattern of the species complex is a close parallel with that of *Bubo bubo* is suggested by recognising *A.n.indigena* Brehm as the connecting link between the paler and sandy-pink southern group mentioned above and the greyer and darker forms inhabiting Europe to the north and west. It will be remembered that in *A.n.indigena* the rectrices tend to be spotted as against barred, as is usual with the nominate and other closely related subspecies. This spotting is found in a number of individuals of the southern group. *A.n.indigena* is also in colour midway between the colder northern and western birds which are predominantly grey, whereas the Balkan birds are a warmer reddish-brown tone. This cline in colour finds its end point in darkness in the Iberian form *A.n.cantabriensis*.[8] A male was collected on 17th October 1954 at Samarra.

EUROPEAN NIGHTJAR *Caprimulgus europaeus europaeus* Linnaeus

An example of this form of the Nightjar was obtained by Dr. Jeffery Harrison at Saqlawiya on 22nd October 1954.

KINGFISHER *Alcedo atthis atthis* (Linnaeus)

A specimen, a male, was shot at Ramadi Old Cut, near Habbaniya on 12th October 1954. This bird has the typically fine bill of the nominate race with which it also agrees in every other respect. Since by most authors *A.a.pallasii* Reichenbach and *A.a.benghalensis* Gmelin are regarded as doubtfully valid forms I have little hesitation in assigning the Iraq bird to the nominate form.

LESSER SHORT-TOED LARK *Calandrella rufescens heinei* Homeyer

A single specimen, a male, was shot from a small party at the edge of Lake Habbaniya by Dr. David Harrison, on 10th January 1954. This individual matches series of *C.r.heinei*.

Measurements: w.= 98mm. b.= 8.5mm., depth = 7mm. t.= 16mm. tl.= 59mm.

JACKDAW *Corvus monedula soemmeringii* Fischer

An adult male of the above race was shot near Samarra on 17th October 1954.

MAGPIE *Pica pica bactriana* Bonaparte

Allouse (*loc.cit.*)[4] refers to this bird as very common in gardens. A specimen was collected; the bird is a female and was shot on 19th October 1954 at Habbaniya. In almost all respects it agrees with the characters given for the above form. It is however remarkable in that it presents on the left outermost tail feather a large oval white spot on the inner vane near the base of the feather close to the rhachis; this measures 22mm. x 8.5mm. The next adjacent rectrix has a small white spot, and the feather adjacent to this has a minute white spot. The two outermost rectrices on the right side similarly show two small elongated white markings.

It would seem that some of the declared criteria for the racial differentiation of *Pica pica* forms are so variable that they are of little, if any, value. One of these is the degree of black bordering of the primaries—this is supposed to be narrow in the form under discussion and heavy in individuals of the nominate race. In the Iraq specimen the second primary has a black tip of 35.5mm. In two French specimens the measurement for this primary is in one 40mm. and in the other 17.5mm., a Bulgarian bird has a tip of 23mm. and two British specimens show measurements of 31.5mm. and 12mm. respectively. This wide variation is also apparent in series from Switzerland. It is also to be noted that the degree and character of the colouration of the rump is extremely variable, ranging from a fairly dark grey-brown to grey with an admixture of white to almost pure white. Resting upon such very inconstant characters I very much doubt whether *P.p.galliae* Kleinschmidt should be recognised. In connection with the colouration of the rump it should be noted that, as a very rare "mutation" individuals with almost completely black rumps which are virtually indistinguishable from *P.p.melanotos* Brehm have been collected in British and German populations of the species. Such individuals usually show a correlated heavy black bordering of the primaries. The incidence of these strikingly distinct individuals was remarked upon by Hartert (1910).[9] Such resemblances to distant geographical forms have already been referred to by me in previous communications as depending upon reversional recombinations with special evolutionary significance.[10] [11] [12]

Measurements: w.= 189mm. b.= 37mm. t.= 45mm. tl.= 228mm.

EUROPEAN NUTHATCH *Sitta europaea davidi* Harrison

The first record for this species for Iraq was noted (*antea* 1955, 75, 59–61)[13] when this new subspecies was described.

ROCK-NUTHATCH *Sitta tephronota dresseri* Sarudny and Buturlin

A male was collected on 20th August 1954 at Ser Amadia, Kurdistan at 6,000 feet altitude. The specimen falls within the individual variation for measurements and colour of the above race.

BLACK-THROATED THRUSH *Turdus ruficollis atrogularis* Temminck

A specimen of this rare winter visitor to Iraq was shot on 21st February 1954 by Dr. David Harrison. It is a female. He notes "Quite a number have been seen in the camp during the last six weeks. Tend to be in parties."

Chapman and McGeogh (*loc.cit.*)[1] record a single example at Shaiba during December 1952 and January 1953. Whether this species is in fact as rare as it has been represented to be would seem questionable, for during the winter of 1953–54 the last named authors comment that "it is the second commonest thrush".

Measurement: w. = 125mm.

BLUE ROCK-THRUSH *Monticola solitarius longirostris* (Blyth)

An immature male of this race was collected by Dr. David Harrison at Ramadi, Habbaniya, on 10th November 1954.

WHEATEAR *Oenanthe oenanthe libanotica* Hemprich and Ehrenberg

Two Common Wheatears, both females, were collected in the Habbaniya district, one on 14th October, the other on 19th October 1954. Both conform to the characters given for the Syrian race, in being considerably paler both above and particularly so below, while on the upper parts as well as being paler, they are somewhat greyish. When compared with autumn material of the nominate race, in the Iraq birds the paleness is particularly evident on the throats and bellies.

Measurements: w. = 94mm.—97mm. b. = 17mm.—15mm. t. = 27mm.—29mm. tl. = 53.5mm.—54mm.

It is clear from the comparison of the two distribution maps, the one by Meinertzhagen (*loc.cit.Map* 16.)[5] and the other by Dementiev *et alia*[14] that there is still considerable variance of opinion upon the taxonomy of this species for, whereas the former author recognises in Eurasia both the nominate race and the form now under discussion, giving the range of the latter as the whole of southern Europe, including the south of Spain, the Balaeric Isles and Corsica, eastwards through the Balkan Peninsula, Asia Minor, Transcaucasia the southern U.S.S.R. and on into Outer Mongolia, the Russian authors recognise *Oe.oe.nivea* Weigold in the Iberian Peninsula as the only other form than the nominate in the whole of the Eurasian mainland with the exception of *Oe.oe.rostrata* Hemprich and Ehrenberg in Syria and Palestine, a form which Meinertzhagen considers synonymous with *Oe.oe.oenanthe.*

PLESCHANKA'S CHAT *Oenanthe leucomela leucomela* (Pallas)

Three immature Pleschanka's Chats, two females and one male were collected at Ser Amadia, Kurdistan at 6,000 feet elevation, the male and one of the females on 19th August, the second female on 31st August 1954.

FINSCH'S ARABIAN CHAT *Oenanthe finschii finschii* Heuglin

A pair of Finsch's Chats was collected on 20th February 1955 between Ramadi and Hit on rocky hill country near the river Euphrates.

Measurements: ♂ w. = 87mm. ♀ w. = 84mm.

ISABELLINE WHEATEAR *Oenanthe isabellina* (Cretzschmar)

Two examples of this species were collected, one near Habbaniya on 21st August the second on 21st December 1953, both are immature females.

PIED WHEATEAR *Oenanthe leugens persica* (Seebohm)

An adult male of this form was collected by Dr. David Harrison on 18th January 1954 seven miles south-south-east of H.2 Pumping Station in north-west Iraq.

STONECHAT *Saxicola torquata maura* (Pallas)

One male and two females were obtained, the two females were shot erspectively on 2nd December 1953 and 27th December 1954, one near

Habbaniya and the other at Saqlawiya; both are generally paler above and below than the nominate race and would therefore appear referable to the above form. The male is slightly paler above than comparable nominate material and also has rather more white on the belly than is usually present in *S.t.rubicola*. There is only the slightest white at the extreme base of the tail feathers. It was shot on 15th October 1954 at Habbaniya.

Measurements: ♂ w.= 65mm. 2♀♀ w.= 63mm. 65mm.

BLUETHROAT *Cyanosylvia svecica svecica* (Linnaeus)

A single male, not quite fully adult, was shot near Habbaniya on 2nd January 1955.

Measurement: w.= 71mm.

CHIFFCHAFF *Phylloscopus collybita abietinus* (Nilsson)

Three Chiffchaffs, all males, were collected at Habbaniya, one on 12th October, the two others on 16th October 1954. They all agree perfectly with the Scandinavian form.

WILLOW-WARBLER *Phylloscopus trochilus* ⋛ *acredula*

A Willow-Warbler obtained on 16th October 1954 at Habbaniya is clearly an intermediate between the nomonate and eastern race.

MOUSTACHED WARBLER *Lusciniola melanopogon mimica* Madarasz

Since the status of this species in Iraq requires further investigation (*fide* Allouse, *loc.cit.*)[4] and as it would appear to be known principally as a wintering species, a first winter male obtained on 16th October 1954 at Habbaniya is considered worthy of note. In their summary of records Moore and Boswell (*loc.cit.*)[2] make no mention of the occurrences noted by Ticehurst (*loc.cit.*)[3] as seen by Buxton to the south-east of Amara on 13th July, birds which were evidently breeding.

REED-WARBLER *Acrocephalus scirpaceus fuscus* Hemprich and Ehrenberg

MARSH-WARBLER *Acrocephalus palustris* (Bechstein)

Four acrocephaline warblers were obtained during October. As is well known field identification, which of course is made ideally in the breeding terrain when the males are singing, may be said to be often more certain than the identification of specimens. This fact has been stressed by various authors.

The best morphological character, though even this is not absolutely constant and is in any case a slight difference only, is the position of the emargination on the *inner* web of the *second* primary which in *A.scirpaceus* forms is about 12mm. from the tip of the feather while in *A.palustris* it is about 10mm. from the tip. To add to the difficulties, with wear the emargination may well be effaced! The colour differences in the two species are by no means striking but, *A.scirpaceus* is on the whole somewhat darker and browner and *A.palustris* is rather lighter and greyer.

WHITETHROAT *Sylvia communis rubicola* Stresemann

An adult male Common Whitethroat was shot on 10th August 1954 at Ser Amadia Kurdistan, at 6,000 feet elevation. This specimen agrees well with this race.

DESERT-WARBLER *Sylvia nana nana* Hemprich and Ehrenberg

Four specimens of this species were collected, one a winter bird, a male, being obtained near Section 2, Wadi Tharthar on 29th January 1955. Of the other three specimens, one a male was collected on 31st October 1954 at Haur-al-Hasa, the other two, a pair, were shot on 20th October 1954 on Jazirah Desert.

All four specimens appear slightly darker and greyer than comparable Indian material and considerably darker than birds from southern Arabia, (Aden, Saudi Arabia), which are a light sandy isabelline colour underneath.

According to Allouse (*loc.cit.*)[4] the status of this species in Iraq is insufficiently known. The species was apparently not observed by Moore and Boswell (*loc.cit.*)[2], but Chapman and McGeogh (*loc.cit.*)[1] note one seen on 15th March 1953 at the Junction Sand-pit at Shaiba.

MENETRIES WARBLER *Sylvia melanocephala mystacea* Ménétries

Allouse (*loc.cit.*)[4] refers to the nominate race of the Sardinian Warbler as a common bird which is absent only during the coldest months of the year, nor is this race of the species mentioned either by Ticehurst (*loc.cit.*)[3] or Meinertzhagen (*loc.cit.*)[5]. However Moore and Boswell (*loc.cit.*)[2] refer to birds seen in Kurdistan in the Zakho Gorge and on the Kala Tepe at over 3,000 feet elevation which it was considered ''might be Sardinian Warblers''. (*S.melanocephala* sp.) Ticehurst in a later note (1926)[5] recorded this form as being not uncommon at Mosul.

Two immature males were collected, the one on 16th October at Habbaniya the second at Haur-al-Hasa on 31st October 1954. In the former the whole of the upper-parts are a uniform brownish-grey, in the other the left frontal region of the crown shows a small triangular patch of sooty black appearing.

Measurements: w.= 56.5mm., 57.5mm.

RUFOUS/GREY-BACKED WARBLER *Erythropygia galactotes familiaris* (Ménétries)

A single specimen, a male of the year was caught in a mouse trap baited with a grasshopper for rodents by Dr. David Harrison on 10th August 1953. This bird agrees perfectly with the above named form.

Measurement: w.= 83.5mm.

HUTTON'S BABBLER *Turdoides caudata huttoni* (Blyth)

Since the distributional pattern of both the babbler species in Iraq would appear to be insufficiently known, a female obtained on 14th February 1954 about 20 miles south of Falluja is recorded here. The bird was shot from a party using some camel-thorn bushes on the east bank of the Euphrates river.

MESOPOTAMIAN BABBLER *Turdoides caudata altirostris* (Hartert)

Three examples of the above species were obtained, one a female on 3rd January 1954, near Habbaniya, the second, a male, on 23rd January 1955 at Abu Ghuraib about 20 miles south of Falluja on the east bank of the Euphrates, while the third specimen also a male, was shot on 9th January 1955, at Saqlawiya.

(*to be continued*)

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

17th February, 17th March, 21st April, 19th May, 15th September, 20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Twenty-one Shillings Annually. Two Shillings and Sixpence per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PURCHASED
1959

BRITISH MUSEUM
NATURAL HISTORY

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 3

March
1959

SEED [illegible]

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

PURCHASED
1959

Volume 79

Number 3

Published: 2nd March, 1959

BRITISH MUSEUM NATURAL HISTORY

The five hundred and seventy-first meeting of the Club was held at the Rembrandt Hotel, S.W.7. on Tuesday, 17th February, 1959, following a dinner at 6.45 p.m.

Chairman: MR. C. W. MACKWORTH-PRAED.

Members present, 22; Guests, 2; Guest of the Club, Mr. H. J. de S. Disney; Total, 25.

B.O.U. Centenary

March 1959 will long be remembered for the Centenary Celebrations of our parent organisation, the British Ornithologists' Union. All members of the B.O.C. wish to send their sincere congratulations and good wishes to the B.O.U. on this momentous occasion. Although this may seem a little strange, for we are in a sense sending our good wishes to ourselves, this is not altogether inappropriate, as there are many members of the B.O.U. who do not belong to the Club. It is true that the formation of a dining club 77 years ago, was not initially greeted with unanimous approval by the B.O.U., but we have always been closely bound together and our joint meetings have always been most successful, while the *Ibis* and the *Bulletin* each occupy their own ecological niche in the realm of ornithological publications, but share many contributors between them.

We are proud of our association with the Union and it is in this spirit that we extend our greetings on a great occasion.

"Work on *Quelea quelea* in Tanganyika"

Mr. H. J. de S. Disney gave a most interesting talk, illustrated by coloured slides and supplied the following summary:—

This dimorphic weaver occurs in most of the drier areas of Africa, its main habitat being below the 30 inch rainfall isohyet. It is colonial in all stages of its life. The Tanganyika race is intermediate between the northern and southern races. A description of the assumption of breeding plumage was given and also notes on the nesting, roosting, drinking, damage, control and movements, etc. Nest sites may be from 10–1,000 acres or more and the nests are destroyed by diesoline Flame Throwers. Roosts are sprayed from the air with an Insecticide or are blown up.

The age of *Quelea* cannot be determined with any certainty by the pneumatisation of the skull. 15–20% remain ''unossified'' the following season after hatching. Female skulls ''ossify'' quicker than males and are usually complete in 6 months.

Experimental evidence shows that birds hatched in March and April in Tanganyika could breed in December and January in Southern Kenya. When all birds are in non-breeding plumage after nesting, young and old birds can be distinguished by their wing moult.

In 1955 it was shown that the male gonads in March and April in Central Tanganyika started to collapse 14–20 days after the young had hatched and when they were out of their nests but still being fed by their parents. Cage evidence shows that once eggs have been laid the birds will go on trying until they succeed or conditions become impossible. Thus if a nesting site is destroyed the parents will nest again.

Both the French and I have had a pair raise two broods in cages, but I do not believe that in the field you will get two successful broods by the same birds within one rainy season. The problem is complicated by the two rainy seasons in Kenya and Tanganyika and it is not known how soon the male testes can reorganise and come up again and how quickly the birds can moult back into breeding plumage or how soon the female can be ready to lay eggs again.

Rainfall or the resulting high humidity seems to have a very strong stimulus towards getting the adults to build and the resulting green grass and green seed seems to trigger off egg laying. In cages some old birds which have not bred go straight from breeding plumage back into breeding plumage.

Young birds taken while still being fed by their parents, under the stimulus of rain, green grass and food go straight from juvenile plumage into breeding plumage, but if the stimulus is insufficient they will only go partially into breeding plumage and then into normal non-breeding plumage and start to come into breeding plumage again the same time as the rest of the birds. If Diochs did breed in 3 months it would not be unique as the Australian Zebra finch is capable of doing this.

It has been calculated that one bird eats the equivalent of two ounces of mature wheat a day, so that a roost of 492,000 was eating 300–200 lb. bags of wheat a day, or 27 tons.

Ringing has shown that much of Kenya trouble is from birds bred in Central Tanganyika. Picric acid dye has also been used to identify the birds and it is very useful for following plumage changes in cages. Various traps used to catch the birds were described.

The West African races of the Lemon-Dove *Aplopelia larvata* (Temm. and Knip)

by Dr. William Serle

Received 6th October 1958

A series of eight *Aplopelia larvata*, 5 adult males, 1 adult female, and 2 immature females, collected by me on the Cameroon Mountain between 17th November, 1956 and 23rd April, 1957, throws some light on the relationships of the West African populations of this dove.

The West African material at the British Museum comprises seventeen *A.l.simplex* (Hartlaub), type locality São Thomé Island, eight *A.l.principalis* (Hartlaub), type locality Principe Island, four *A.l.inornata* Reichenow, type locality Buea, Cameroon, three *A.l.poensis* Alexander, type locality Fernando Po, including the type and also the type of *A.l.seimundi* Sharpe a synonym of *poensis*, and seven *A.l.plumbescens* Sharpe type locality Efulen, including the type. By the courtesy of Mr. J. D. Macdonald of the Bird Room I have examined these together with the series from the Cameroon Mountain already mentioned and also the two adult females collected on Kupé Mountain, British Cameroons and recorded in the 'Ibis', 1947 p.355 and 1954 p.55.

At the British Museum there are no examples of *A.l.hypoleuca* Salvadori, type locality Annobon and no examples with precise locality of *A.l.forbesi* Salvadori, and these forms are not considered here. Nor except in passing is *A.l.principalis*, a quite distinct race whose validity is unquestioned.

I follow Amadon (Bull. Amer. Mus. Nat. Hist. (1953) 100:414) in regarding the West African forms of the Lemon Dove as races of *A.larvata* (Temm. & Knip), type locality Knysna, Cape Province. At first sight they appear rather unlike *A.larvata*, but the forms *A.l.jacksoni* Sharpe, *A.l. samaliyae* White and *A.l.principalis* have characters that ally them both to the South and East African populations and also to the West African populations and seem to form a link between them.

The assessment of the validity of *simplex*, *inornata*, *poensis*, and *plumbescens* is difficult for three reasons. Firstly the wide individual range in plumage and the occurrence of colour phases, secondly the small number of adult female specimens, and thirdly the fact that the sexing of certain of Boyd Alexander's specimens, which form the bulk of the Museum series, is doubtful. Unfortunately size is not a reliable guide to sex, for while the average wing and tail lengths of males slightly exceeds that of females the size ranges of the sexes overlap considerably.*

The males of the different populations are considered first. The adult male *simplex* of São Thomé, the first described West African form, has glossy dark olive brown upperparts except for the pale grey forecrown and the strongly glossed hind crown, nape, and mantle which are greenish or pinkish-violet according to angle and light. The underparts are grey, lighter in shade on the chin and belly. Amadon (loc. cit.) in his review of the American material describes two types of adult male dress in São Thomé birds, a grey phase, predominantly grey below, agreeing with the description of male *simplex* given above, and a less common brown phase, predominantly brown below and much like the adult female. The same two phases appear in Boyd Alexanders' São Thomé series, assuming that these have been correctly sexed, nine adult males being of the grey phase and one of the brown phase.

Considering next *inornata* of Cameroon Mountain, the five males in my collection resemble the grey phase *simplex* of São Thomé, yet the colour of the upper parts is variable. In three of them the upper wing coverts,

*Measurements of the series collected in 1956–1957 on the Cameroon Mountain above Buea: 5 adult ♂: wing 151,145,145,143,142; tail 85,86,81,82,79; bill to cere 11; tarsus 26–27. 1 adult female: wing 140; tail 80; bill to cere 12; tarsus 26. 2 immature females: wing 141,137; tail 83,86; bill to cere 10,11; tarsus 27, 26 mm.

back, rump, upper tail coverts, and middle rectrices are predominantly purplish slate, whilst in two of them these parts are predominantly dark olive brown, as they are in the only Cameroon Mountain male specimen in the British Museum collection. These two phases, based on the colour of the upper parts, the purplish slate and the olive brown, are quite distinct, and the latter are indistinguishable from Amadon's grey phase São Thomé males.

The type of *plumbescens* is unfortunately an immature male with brown-tipped wing coverts, but four other males, all adult, from French Cameroons, resemble the Cameroon Mountain series, two from Ja River being predominantly purplish slate above, and one each from Assobam and Genderu being predominantly olive brown above.

Of the two Fernando Po *poensis* labelled males, one (the type of *A*. seimundi) is indistinguishable from Cameroon Mountain males with purplish slate upper parts, and the other (the type of *poensis*) though labelled originally '♂' has been altered (I think in Alexander's own hand) to '♀', and resembles an adult female.

On the evidence available therefore there are no plumage characters by which male *simplex*, *inornata*, *plumbescens*, and *poensis* can be distinguished. Nor can they be distinguished by size.

Adult females of the group exhibit much individual variation. Bannerman ('Ibis', 1916, p.9) used the colour of the under tail coverts as the key distinguishing racial character, yet adult females from the same locality, Kupé Mountain and Cameroon Mountain for example are two such localities, may show differently coloured under tail coverts, so that this character does not seem to be a good one.

The adult female *simplex* of São Thomé has the upperparts not very different in shade from the male but the gloss is less. The under parts are light cinnamon brown, becoming greyer in shade on the belly and under tail coverts. Of the seven São Thomé skins labelled '♀' in the Museum, only one agrees with this description. Of the rest one is in normal grey adult male plumage and five are rather intermediate between the grey male plumage and the brown female plumage. Some or all of these male-like or intermediate specimens may have been wrongly sexed, or (a less likely explanation) certain females on São Thomé may assume male or intermediate dress.

Four adult females of *inornata* from Cameroon Mountain resemble the normal brown São Thomé simplex except that the under parts are a little darker in tone.

Two adult females of my collecting from Kupé Mountain closely resemble the brown São Thomé *simplex*.

One adult female *plumbescens* from Bitye closely resembles the Cameroon Mountain female series.

A *poensis* from Fernando Po marked '♀' resembles the São Thomé specimens in male-female intermediate plumage.

On the evidence afforded by this admittedly very inadequate and rather unsatisfactory material there are again no plumage characters by which female *simplex*, *inornata*, *plumbescens*, and *poensis* can be definitely distinguished.

Although there are grounds therefore for synonymising *inornata*, *plumbescens*, and *poensis* with *simplex* I think it better not to do so meantime for the following reasons. The names *inornata*, *plumbescens*, and *poensis* have been current for many years and they usefully designate certain geographical populations of *larvata*. Further, *principalis* of Principe Island, a very distinct race is geographically interposed between *simplex* and the other West African populations. And finally the conclusions reached regarding the similarity of *simplex*, *inornata*, *plumbescens*, and *poensis* must remain tentative till such time as adequate accurately sexed adult female material is available for study.

A New Race of the Weaver *Ploceus cucullatus* (Müller) from East Africa

by Mr. P. A. Clancey

Received, 16th October, 1958

Chapin, *Birds of the Belgian Congo*, part iv, 1954, p.360, records that three topotypical specimens of *Ploceus cucullatus nigriceps* (Layard), 1867: Bulawayo, Southern Rhodesia, from Rhodesia are "distinctly duller, lighter yellow, than most East African examples." A series of ten adult breeding males of what is currently believed to be *P.c.nigriceps* collected by myself in the coastal area of Kenya Colony to the north of Mombasa in April, 1958, confirms Chapin's observation, showing clearly that East African birds are much richer and deeper coloured throughout than the topotypical populations. I consider it advisable to split the present race *P.c.nigriceps* into two, and for the new East African representative a name appears to be needed:

***Ploceus cucullatus paroptus*, subsp. nov.**

Type: ♂, adult. Sokoke Village, Sokoke Forest, inland from Kilifi, coastal Kenya Colony. Altitude about 400 ft. a.s.l. Breeding. Collected by P. A. Clancey. 19th April, 1958. In the collection of the Durban Museum.

Diagnosis: ♂ ad. Differs from *P.c.nigriceps* (Layard) of southern Africa on account of the deeper yellow of the upper-parts (about Lemon Chrome, Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. iv, as against Lemon Yellow (same pl.)). On under-parts more saliently different, being an intensely brilliant Lemon Chrome with an overlay of Cadmium Yellow (pl. iii) this being especially marked on the sides of the lower throat and breast. In *P.c.nigriceps* the yellow ventral surfaces are nearer Lemon Yellow with an overlay of Light Cadmium (pl. iv) restricted to the sides of the lower throat. Wings rather blacker, and with broad, sharply defined Lemon Chrome fringes to the secondary-coverts and tertials, as against yellowish white, poorly defined fringes in *P.c.nigriceps*. Tail more golden, less greyish, olive. Similar in size.

Paratypical material: 11 ♂♂, 2 ♀♀.

Measurements of the Type: Wing (flattened) 87.5, culmen (exposed) 22, tarsus 26, tail 51.5 mm.

Range: Not accurately and completely known. Ranges from the valley of the Juba River, southern Somalia, and Kenya Colony to Tanganyika Territory, northern Portuguese East Africa and Nyasaland. In the west to Lake Tanganyika, the Katanga, southern Belgian Congo, and, perhaps, parts of Northern Rhodesia Intergrading populations *P.c.paroptus* ≷ *P.c.nigriceps* are known from the Chiromo and Port Herald districts of southern Nyasaland, and Chapin, *loc.cit.*, records intergrades *P.c.paroptus* ≷ *P.c.graueri* from Moba and Tembwe, on Lake Tanganyika. On the western periphery of its range in Kenya Colony it presumably intergrades with *P.c.feminina.*

Remarks: Females of *P.c.paroptus* show little marked difference in colour, being slightly more washed with olive on the mantle and with the lower throat rather deeper yellow. The wings of the paratypical series of 11 ♂♂ of *P.c.paroptus* measure 84–89 (86.4) mm. One or two males of *P.c.paroptus* adumbrate the head characters of *P.c.cucullatus*, *P.c.frobenii*, etc., in having an extension of yellow from the neck onto the sides of the crown. Some skins of *P.c.nigriceps* also reveal a similar deviationary trend in that race.

P.c.nigriceps has the pale yellow body-colouration of the recently described *P.c.dilutescens* Clancey, 1956: Palmeira, Manhiça, Sul do Save, southern Portuguese East Africa, from which it differs only in having the head-top black, like the face and throat. *P.c.nigriceps* also resembles *P.c.dilutescens* and *P.c.spilonotus* Vigors, 1831: Algoa Bay, eastern Cape Province, South Africa, in having the secondary-coverts and tertials with less sharply defined and paler fringes than in *P.c.paroptus* and the central and western African representatives. There seems to be no doubt whatsoever that *P.spilonotus* (with the race *P.s.dilutescens*), *P.nigriceps*, *P.collaris*, and the various subspecies of the *P.cucullatus* complex are all conspecific. The valid races of the enlarged species, *P.cucullatus*, are as follows:

Ploceus cucullatus cucullatus (Müller), 1776
Ploceus cucullatus frobenii Reichenow, 1923
Ploceus cucullatus bohndorffi Reichenow, 1887
Ploceus cucullatus abyssinicus (Gmelin), 1789
Ploceus cucullatus feminina (Ogilvie-Grant), 1907
Ploceus cucullatus graueri Hartert, 1911
Ploceus cucullatus collaris Vieillot, 1819
Ploceus cucullatus paroptus Clancey, 1959
Ploceus cucullatus nigriceps (Layard), 1867
Ploceus cucullatus dilutescens Clancey, 1956
Ploceus cucullatus spilonotus Vigors, 1831

In coastal Kenya Colony, topotypical *P.c.paroptus* was found breeding in native villages alongside other sociable weavers, namely, *Ploceus bojeri* (Cabanis) and *Ploceus subaureus aureoflavus* Smith. On one occasion it was found consorting in a mixed bird-party with the rare *Ploceus golandi* (Clarke) in the depths of the Sokoke Forest.

The name of the new race is taken from the Latin *paroptus*, slightly roasted—an allusion to the pronounced rusty golden wash on the sides of the lower throat and breast.

The Systematics of the African Grey Tits, *Parus afer* and *Parus griseiventris*

by MRS. B. P. HALL AND MR. MELVIN A. TRAYLOR

Received, 12th November, 1958

The populations of *Parus afer* from Angola to south-western Tanganyika and south to Cape Province are readily separated into three distinct groups.

for which the earliest names are *afer*, *cinerascens* and *griseiventris*. Birds of the *afer* group are characterised by long and deep culmens (13.0–15.0 mm.), a distinct white nape patch, pure white cheeks and edgings to the tail feathers, mouse brown backs and buffish underparts. The *cinerascens* group, to which the names *intermedius*, *damarensis* and *orphnus* apply, differs from the *afer* group in having grey backs and underparts. The *griseiventris* group is characterised by short slender culmens (11.0–12.5) little or no white nape patch, and greyish cheeks and edgings to the tail feathers; back and underparts grey. The names *parvirostris* and *lundarum* have been applied to populations of *griseiventris*.

Birds of the *afer* group are confined to south-central and western Cape Province and neighbouring parts of Basutoland, Orange Free State and extreme western South West Africa. Those of the *cinerascens* group range north from northern Cape Province through South West Africa and along the arid coastal strip of Angola to Benguela in the west, and to Mashonaland and the Inyanga highlands of Southern Rhodesia in the east. The *griseiventris* group inhabits a wide band from southern and central Angola east through Northern Rhodesia and the Katanga to south-western Tanganyika, Nyasaland and Mashonaland.

Besides the physical differences noted above, all groups exhibit strong ecological preferences that can permit them to overlap geographically without interbreeding. The *afer* group is confined to karroo scrub; the *cinerascens* group to thorn bush, chiefly acacia, while *griseiventris* is entirely a bird of the *Brachystegia* woodlands. Stuart Irwin in the following paper describes in detail the relationship of *cinerascens* and *griseiventris* in Southern Rhodesia. In that area they overlap widely geographically but each is confined to its preferred habitat and there is no intergradation. In Angola a similar situation prevails, but without a known overlap: a population of *cinerascens* extends north along the semi-desert thorn country of the coastal strip to Benguela, while in the woods on top of the escarpment just inland, from Huila north to Mt. Moco, is found *griseiventris*. There is no trace of intergradation in any of our specimens from this area, and it is evident that the two are here completely isolated reproductively.

Since, in the two regions where the ranges of the *cinerascens* and *griseiventris* groups are contiguous the forms meet without intergrading, there is a good case for recognising them as two species instead of races of one widespread form. If this is done the question arises as to whether *afer* and the *cinerascens* group should also be considered as separate species. This has been discussed by Macdonald (Contr. Orn. W. So. Afr., 1957: 146) who found some indications of intergradation in specimens of *afer* from Witputs, and in specimens of *cinerascens* from the Keetmanshoop area—there is indeed less likely to be complete ecological segregation between forms of the Karroo scrub and the thorn veld, which in places merge, than between forms of the thorn veld and *Brachystegia* woodland. In addition to the fact that there are indications of intergradation no geographical overlap has been proved, but it should not be overlooked that Levaillant, to whose undoubtedly "grey" birds Vieillot gave the name *cinerascens*, stated uncompromisingly that they were common in the "bois mimosas" at Candeboo (i.e. Graaff Reinet). Graaff Reinet is well within the known range of *afer* and this may indicate an overlap, though this has not been supported by recent collecting and there is always some element of doubt about the localities at which Levaillant's birds were actually obtained.

There is thus a less good case for treating *afer* as a separate species from *cinerascens* than for separating *griseiventris*, but both situations represent steps in the progress of speciation. Until concepts of species limits are more clearly defined than at present any decision on the status of each form must necessarily be arbitrary. In deciding to keep *afer* and *cinerascens* conspecific while giving *griseiventris* specific status we have tried to judge each case on its merits within the limits of our present knowledge of the birds in the field.

Clancey (Ibis 1958: 452–454) has recently reviewed the races of the *afer/cinerascens* group in southern Africa. He concluded that within the generally accepted range of *cinerascens* there was a greyer population with purer white ear-coverts and nape in the eastern part of the range east of the Vaal River, in Natal, Transvaal and Southern Rhodesia, and a more buffy population in the west from north-western Cape Province and South West Africa. It was he also who pointed out that Graaff Reinet, which Macdonald, following Levaillant, had made the restricted type locality for *cinerascens*, was within the range of *afer* (as discussed above). He accordingly proposed that it should be altered to Pella's Drift on the lower Orange River. In view of the uncertainty attached to the Levaillant birds this new restriction can be accepted, but it is an unfortunate choice since it still lies close to the range of nominate *afer*. Clancey then uses the name *cinerascens* for the allegedly more buffy western birds, and revives the name *intermedius* (subsequently renaming it *orphnus* Bull. B.O.C. 1958: 133) for the eastern birds.

From the series in the British Museum this division between east and west was not apparent. Mr. Clancey very kindly sent three specimens from Kenhardt and Niekerkshoop, northern Cape Province, which he considered typical of *cinerascens*, and three of *orphnus*. The differences between the two groups of three were immediately apparent and as he had described, but the three "*cinerascens*" were not representative of western birds generally, being close matches with the Keetmanshoop and Klein Karas birds. The three *orphnus* were very fresh, very recently collected specimens. They match closely with one from Tsabong and one from Tsane, western Bechuanaland, and five from Okahandja, Damaraland, also fresh and recently collected. A comparatively recently collected but rather more worn bird from the Erongo Mts. is very little less grey; that this difference is easily attributable to wear is demonstrated by a specimen from Kamanjab, southern Kaokoveld, which is moulting from old buffy plumage into fresh blue grey. In all worn or older birds from the respective areas no colour differences are apparent, all being less pure grey than fresh specimens. Since it is not practicable to restrict the name *cinerascens* to an intermediate population, and one moreover that surrounds a rather debatable type locality, there seems no reason to recognise more than one race from South West Africa to the Transvaal.

There is no question, however, but that nine specimens from the arid coastal plain of Benguela are strikingly paler on the underparts than Damaraland specimens and must be described as:

Parus afer benguelae, subsp. nov.

Type: Adult ♂ from 12 miles S.E. of Benguela, W. Angola: collected by G. W. Lathbury, 12th September, 1957. B.M. Reg. No. 1957.35.3.

Diagnosis: Much paler on the underparts than *cinerascens* with consequently no visible paler edging separating the black breast patch from the remaining underparts as is found between the black and grey in *cinerascens;* averaging smaller in wing length.

benguelae, wing of 6 ♂♂ 72, 75, 76, 77, 77, 78; 2 ♀♀ 71, 73; one unsexed 74:
cinerascens 17 ♂♂ 78–84 (once 76); 22 ♀♀ 74–84 (once 72).

Size of type: wing 76; culmen 14; tail 55 mm.

Distribution: Arid coastal strip of Benguela, Angola, possibly extending into the coastal region of northern South West Africa.

Remarks: Our nine specimens of *benguelae* are consistent in being much paler on the abdomen and sides of the breast than *cinerascens* from Damaraland, both in comparison with fresh, and therefore purer grey, specimens, and with more worn and therefore buffier birds. All but one are either in fresh plumage or are completing moult. A single female from Orupembe in the northern Kaokoveld is somewhat smaller than typical *cinerascens*, wing 73. It is probable that *benguelae* is not as isolated from *cinerascens* as present collecting would indicate, and the two forms may be found to merge in the coastal strip of northern South West Africa and extreme southern Angola.

From a series of 39 adults of *griseiventris* in Chicago and New York it is evident that there is some geographic variation within this form, but it is not possible to delimit races satisfactorily. There seems to be a slight cline of decreasing wing length from west to east; Angola 21 ♂♂ 77–85 (81.7); 6 ♀♀ 76–82 (79.3); eastern Northern Rhodesia and south-western Tanganyika 3 ♂♂ 78, 79, 79, 3 ♀♀ 76, 78, 79. In colour of the underparts there are two pale populations, one in the area Katanga-eastern Northern Rhodesia-Tanganyika, the other in far western Northern Rhodesia-northern Angola. These are separated by a darker population from central Northern Rhodesia, and there is a second dark population in central and southern Angola in Benguela, Huambo and Huila. Occasional white napes appear in Northern Rhodesian and Angola birds. Although the above differences are evident when series are laid out, it is not possible to satisfactorily limit a pale and a dark race, and we consider *griseiventris* monotypic.

The East African representatives of the Grey Tit, *barakae* and *thruppi*, are isolated geographically from all other forms and are much smaller in wing length, always less than 70. In other characters, however, they are closely related to the *cinerascens* group and must be included with *cinerascens* as subspecies of *afer*. The bill is proportionately long and deep as in *cinerascens* and *afer*, the cheeks are white or near white and distinct from the dirty buff of the underparts, and there is usually a well marked white nape patch. They are also, like *cinerascens*, birds of the acacia, thorn bush country.

The species and races of the Grey Tit we recognise are therefore as follows:

Parus griseiventris Reichenow, 1882: Kakoma, Tanganyika. Monotypic species.

Synonyms: *P. a. parvirostris* Shelley, 1900: Salisbury, S. Rhodesia. *P. a. lundarum* White, 1946: Mwinilunga, Northern Rhodesia.

Parus afer

(*a*) *Parus afer afer* Gmelin 1789: Cape of Good Hope.
Synonym: *Parus brunnescens* Reichenow, 1916: Kubub, Namaland, (Orange River at approx. 17° E).

(*b*) *Parus afer cinerascens* Vieillot, 1818: ''Candeboo'' error, restricted to Pella's Drift, N. Cape Prov. Clancey (Ibis 1958: 453).
Synonyms: *Parus afer intermedius* Shelley, 1900: Potchefstroom. *Parus afer orphnus* Clancey, 1958 (new name for *intermedius*): Potchefstroom. *Parus afer damarensis* Reichenow, 1902: Damaraland.

(*c*) *Parus afer benguelae* Hall & Traylor: Benguela.

(*d*) *Parus afer barakae* Jackson, 1899: Njemps, L. Baringo, Kenya.

(*e*) *Parus afer thruppi* Shelley, 1885: Somaliland.

We would like to thank the authorities of the American Museum of Natural History in New York for permission to study their material.

The Specific Relationship of *Parus afer* and *Parus griseiventris*

by Mr. Michael P. Stuart Irwin

Received, 12th November, 1958

The discussion that follows is intended to be supplementary to that presented by Hall and Traylor in the previous paper and is largely the outcome of a study of the relationship of *Parus afer cinerascens* and *Parus griseiventris* in their now known area of geographical overlap in Southern Rhodesia. These two forms have always been regarded as conspecific, but as has just been shown, there are good and constant morphological distinctions between the two groups and both are representative of different, and faunistically distinctive biomes.

In *Bull. B.O.C.*, 76, 1956: 114–115 I discussed some aspects of the adaptive differences in bill size in the Southern Rhodesian forms as then understood, in which it was demonstrated that the thin billed *griseiventris* was restricted in its distribution to well-developed *Brachystegia* woodland, whilst *cinerascens* occurred only in acacia thorn veld or scrub. It was then believed that the two forms intergraded in the Midlands, but the additional material now available, makes it clear that the differences are clear cut and constant.

When it was first realised that an actual case of geographical overlap existed, with strict ecological segregation in different habitats, it was thought to be a marginal one between races, but it is now realised, that what we are dealing with, are in reality members of two distinct specific groups.

Without first having examined material, it was clear from the existing literature that the two northern races *P.a. barakae* and *P. a. thruppi*, were morphologically and in their ecological preferences, more similar to the southern *P. afer* and its races, than to the geographically intervening *P. griseiventris*. It was therefore assuring to find that the authors of the previous paper had independently arrived at the same conclusion and were prepared to recognise two species.

The faunal relationship of the Somali and South-West arid districts, to which the *P. afer* forms belong, are well understood (see especially Moreau, *P.Z.S.*, 121, 1952: 887–894) and it is therefore not unexpected that the case under review should be further evidence of this affinity. This pan-arid fauna is a specialised one; in few if any instances are its typical elemenst represented in any other major biome. One noteworthy example and forming a close parallel, has already been discussed in *Bull. B.O.C.*, 78, 1958: 19–20: that of the races of the barbet *Lybius leucomelas*. In this instance too, the Acacia-specific pan-arid races were considered more closely related to each other than to the race restricted to *Brachystegia*, but here also we may be in reality dealing with two species.

In the case under review, this separation must be relatively old and undoubtedly dates back to one of the Pleistocene dry phases when an interchange of populations would have become possible. As this must have taken place at intervals throughout the Pleistocene with its fluctuations in climate, any speculative dating with any degree of accuracy, would be dangerous. However, the small degree of comparative distinctiveness so far attained between the two groups, points to some stage in upper Pleistocene time, possibly even in a post Gamblian dry phase.

If then, *P. afer* with its geographically isolated populations are considered conspecific, then *griseiventris* must be in time an older species, having arisen from an earlier diversification of the same ancestral stock. It is of course highly probable that the ancestor of the whole complex may have originally colonised Africa from the Palaearctic region during an earlier stage in the Quarternary period. The species group is nearest to the widespread Palaearctic *P. major* than to any other and Meinertzhagen, *Ibis*, 93, 1951 : 450, even went as far as to treat them all as conspecific.

The nature of the geographical overlap in Southern Rhodesia can now be discussed. A close contiguity between *cinerascens* and *griseiventris* has already been shown to occur in Angola; where, as in Southern Rhodesia they are apparently reproductively isolated. The Angola populations appear to remain allopatric, though of course further detailed investigation in the field is necessary.

Cinerascens ranges widely throughout the drier areas of southern Africa in an overall acacia association from semi-desert scrub in the Kalahari to the Inyanga highlands in eastern Southern Rhodesia. *Griseiventris* is, on the other hand, to the south of the Zambezi River, restricted in its distribution to an isolated population confined to above about 3,000 ft. on the Mashonaland plateau and along the eastern border of the territory east of the low lying country of the Sabi Valley to about 20°30′S.

In *Bull. B.O.C.*, *loc. cit.*, I especially drew attention to a *cinerascens*-like bird collected from an *Acacia abyssinica* association in the Inyanga highlands at 6,000 ft., adjacent to montane evergreen forest. At that stage it was thought that this might represent an undescribed race restricted to this montane area. In colour it was considered to be intermediate between what then were considered two races, but on re-examination proves to be representative of true *cinerascens*, with diagnostic white nape and face patches and dark grey under-parts. Since this discovery of *cinerascens*, deep within the range of *griseiventris*, both forms have since been collected from different habitats at Rusape and Selukwe. Details of these occurrences can now be given and the position analysed. A *griseiventris* was obtained by the author from well-developed *Brachystegia* woodland 3 miles west of Rusape, where they were not uncommon and later H. B. Masterson collected a typical *cinerascens* from scrub veld on Rusape commonage where it was taken in "low scrub on a termite mound". This in itself is not strictly an acacia association, but probably the result of the modification of the habitat through human agency. About a mile or so further north along the valley of the Lesapi River, a considerable area of thorn veld exists and it is significant that the Tit Babbler, *Parisoma subcaeruleum*, a highly thorn-specific form, reaches its northern limit on the east at this locality. The similarly specialised *Bradornis mariquensis* is also known to occur some miles to the north at Baddeley. At Selukwe *griseiventris* was obtained at Wolfshall some 5 miles from the town, in *Brachystegia* and *cinerascens* in thorn bush in slightly drier country.

Some personal observations on the occurrence of *cinerascens* in the Midlands are worth mentioning. At Umvuma it was common, though very local, wherever there was sufficient thorn bush, but further to the east at Chatsworth a pair was collected among scattered *Parinari mobola* trees in open grassland around which grew light *Brachystegia*. Pure thorn bush however, occurred locally within a few miles and as the birds were very much on the move, had probably wandered. Indeed a certain amount of wandering seems probable in *cinerascens* whereas *griseiventris* never ventures out of well-developed *Brachystegia* and is indeed absent from most of the poorer formations where a distinct tree canopy does not exist.

It would appear that *cinerascens* has tended to penetrate into the range of *griseiventris* and this may still be actively progressing. The removal of *Brachystegia* through human agency, with often the modification of the original habitat would assist in this. *Griseiventris* must always disappear on the destruction of the woodland on which it so closely depends and its possible eventual replacement by an association more closely suited to *cinerascens*. Considerable areas of natural thorn bush exist in the Midlands from Selukwe, Umvuma and Chatsworth to Buhera and the south Marandellas district, but to the west on the plateau is completely replaced by *Brachystegia* woodlands.

As in Angola, ecological factors in bringing about reproductive isolation are obvious. Behaviour differences may also operate. Though not as yet conclusive, it is thought that there may be voice differences between *griseiventris* and *cinerascens*, that of the latter being harsher and more strident with a distinct bubbling call. *Cinerascens* at Inyanga has the same call as the birds about Bulawayo, the Inyanga bird being collected at that stage because the call was then personally unknown to me and seemed different to that of *griseiventris;* unfortunately no specific notes on the calls of the latter are at present available. Benson, *Ibis*, 88, 1946: 305, gives a description of the calls of *P. a. thruppi*, but this again does not directly tally with that of its southern representative. Visual factors in individual recognition may also operate as reflected by the contrasting face pattern. It would also be of value to know if the nape patch plays any part in courtship display.

Notes on a Collection of Birds made in Iraq by Flight Lieutenant David L. Harrison

Part III

by DR. JAMES M. HARRISON

Received 10th August, 1958

TAWNY PIPIT *Anthus campestris campestris* (Linnaeus)

A male Tawny Pipit was shot by Dr. Jeffery Harrison at Haur-al-Hasa on 13th October 1954; the specimen is a bird of the year. As in measurements it exceeds those usually given for the species it would seem desirable to put them on record.

Measurements: w.= 100mm. b.= 19mm. t.= 27mm. hallux claw= 9mm. tl.= 81mm.

WATER-PIPIT *Anthus spinoletta coutellii* Savigny

Three specimens were collected in the Habbaniya area between 23rd November and 2nd December during 1935 and 1954. All belong to this race.

GREAT GREY SHRIKE *Lanius excubitor pallidirostris* Cassin
Lanius excubitor aucheri Bonaparte

During the period referred to in this paper four examples of this species were collected, two of these are referable to the first named form, one a female being shot at Haur-al-Hasa on 13th October 1954, the other a male was obtained near Jazirah on 29th January 1955. On the same date and at the same place a male *L.e.aucheri* was shot, and a second example of this race, a female, was obtained on 9th January 1955 at Saqlawiya.

ISABELLINE SHRIKE *Lanius cristatus isabellinus* Hemprich and Ehrenberg.

Two immature males of this form were collected, the one on 3rd January the other on 23rd October 1954. Both were obtained at Habbaniya.

STARLING *Sturnus vulgaris caucasicus* ≷ *persepolis*

That much variance of opinion on the taxonomy of this species exists is clear from the interpretation of material as given in the publications of various authors, and also by the conflicting opinions as to which races should be accepted and which rejected. That this is so is not surprising for the species complex of *Sturnus vulgaris* embraces much intergradation.

The identification of specimens taken outside the reproductive season must inevitably give rise to much difficulty. This confusion and conflict of opinion will undoubtedly persist and it is the writer's view that the position will only be satisfactorily resolved by the comparison of strictly selected breeding material, which should at any rate disclose the principal controlling genotypes.

The only specimen collected is a male which was shot on 30th December 1953; it is an adult. This individual is clearly an intermediate. The race it most nearly approaches on the balance of characters is *S.v.caucasicus* Lorenz, however it differs from that race in having not a green but a purplish head and mantle. That it would appear to be an intermediate with *S.v.persepolis* Ticehurst is suggested by the fact that the chin and throat are purple, the crown more purple than green, the rump and upper tail coverts green, characters strongly suggesting an admixture of

S.v.caucasicus blood, a contention also supported, by the neck and throat which are purple not green as in *S.v.persepolis*, while the belly, the edges of the wing-coverts and secondaries are also green as in *S.v.persepolis*. The under wing-coverts are darkish and edged with pale fawn and the spotting generally is pale as in the latter race. The last named character is very noticeable when it is compared with specimens of the nominate form.

Measurement: w.= 135mm.

CHAFFINCH *Fringilla coelebs solomkoi* Menzbier and Suschkin

This species is recorded by Allouse (*loc.cit.*)[4] as a common winter visitor to the plains. Meinertzhagen (*loc.cit.*)[5] on the other hand refers to it as a straggler. Since it would appear that very few Iraqi specimens have been examined it is not surprising that little seems to be known about the racial identity of these winter visitors. Meinertzhagen (*loc.cit.*)[5] identified one from the Jebel Druze as resembling *F.c.hortensis* Brehm, and a further specimen from Hadr, in northern Iraq as *F.c.solomkoi*.

Dr. David Harrison secured a single male on 9th January 1955 at Saqlawiya which, in general characters matches a specimen from Sarepta in south-western Russia. The whole *Fringilla coelebs* complex presents many difficulties in determining with any certitude the exact distributional limits of the numerous described forms, and consequently opinions as to the validity of the many races which have been separated are at considerable variance at the present time.

YELLOW BUNTING *Emberiza citrinella erythrogenys* Brehm

A single example of the Yellow Bunting was shot on 28th January 1954 on agricultural land near Habbaniya. It is considered to belong to this form.

REED-BUNTING *Emberiza schoeniclus pallidior* Hartert

An example, a female by plumage, was collected from a party in reedbeds near Saqlawiya on 9th January 1955, by Dr. David Harrison.

References:

1. Chapman, E. A., and McGeogh, J. A., 1956, *Recent Field Observations from Iraq*. Ibis, 1956, 98, 577–594.
2. Moore, H. J., and Boswell, C., 1956 '57, *Field Observations on the Birds of Iraq*, Iraq Nat. Hist. Mus. Baghdad.
3. Ticehurst, C. B., Buxton, P. A., Cheeseman, R. E., 1915–'19, *The Birds of Mesopotamia*, Survey of Iraq Fauna, Bombay.
4. Allouse, B. E., 1953, *The Avifauna of Iraq*, Baghdad.
5. Meinertzhagen, R., 1954, *The Birds of Arabia*, Edinburgh.
6. Ticehurst, C. B., 1923, Bull. B.O.C., XLIV, 28.
7. Weigold, Hugo, 1913, *Ein Monat Ornithologie in den Wusten und Kulturoasen Mesopotamiens und Innersyriens. J.F.O.*, 1,33.
8. Harrison, James M., 1957, *A new Race of the Little Owl from North-western Spain*, Bull. B.O.C., 77, 2–4.
9. Hartert, E., 1910, Die Vög. der Paläark. Fauna, 1.20.
10. Harrison, James M., 1949, *Reversionary Trends in Birds*, Bull. B.O.C., 69, 37–44.
11. Harrison, James M., 1951, *Some Phylogenetic Trends in Garrulus glandarius L., and Dendrocopos major (L.)* Proc.X.Int.Orn. Congr. Uppsala, 167–172.
12. Harrison, James M., 1953, *On the Significance of Variations of Pattern and Colour in Birds*, Bull. B.O.C., 73, 37–39.
13. Harrison, James M., 1955, *On the occurrence of the Nuthatch, Sitta europaea L. in Iraq, Sitta europaea davidi* ssp. nov. Ibid. 75, 59–61.
14. Dementiev G., (*et alia*), 1954, *The Birds of the U.S.S.R.*, 6, 494, Map 98. Moscow.
15. Ticehurst, C. B., 1926, *Additional Notes on the Avifauna of Mesopotamia*. Jnl. Bomb. Nat. Hist. Soc. 31, 91–119.

Melaenornis ardesiaca in East Africa

by MR. JOHN G. WILLIAMS

Received 1st October, 1958

During a recent expedition to Uganda in company with Dr. and Mrs. W. Cottrell of Harvard University, a very brief visit was paid to the Impenetrable Forest, Kigezi, south-western Uganda. In this forest *Melaenornis ardesiaca* Berlioz was encountered for the first time in East Africa; an adult male was collected.

The Impenetrable Forest region, recently made accessible from Kabale by the construction of a new road, possesses an extremely rich avifauna at present imperfectly known. Although only a few hours were spent in the forest some extremely interesting species were encountered. These included *Cercococcyx mechowi*; *Ruwenzorornis johnstoni*; another turaco, perhaps an undescribed species, predominantly green in colour with very little red in the wings; *Pholia sharpii*; *Cinnyris regius*; *Anthreptes tephrolaema*; *Nigrita fusconota*; *Spermophaga ruficapilla*; *Hyphanturgus alienus* and *Cryptospiza shelleyi.*

Mixed bird parties were observed working through the undergrowth and small trees along the margin of the forest road, and on two occasions several slaty-black rather slim birds with extremely conspicuous yellow eyes were seen—*Melaenornis ardesiaca.* The species was restless, either perching on projecting bare branches or searching the foliage in the manner of a warbler. When disturbed the birds disappeared quickly into the nearest thick tangle of undergrowth: all those observed were completely silent.

A single specimen was collected on 25th July, 1958. This is an adult male (skull fully ossified) in post breeding condition, in freshly moulted plumage with the exception of the rectrices which are still in moult.

Colours of soft parts: Iris bright pale yellow; bill and feet black.

Measurements: Culmen to base 19; wing 87; tail ca.86; tarsus 25 mm.
Stomach contents: Remains of several lepidopterous larvae and fragments of other unidentified insects. This specimen has been placed in the collection of the British Museum (Natural History) where the species was previously unrepresented.

A new Finch Lark from South West Africa

by MR. C. M. N. WHITE

Received 25th October, 1958

All the southern populations of *Eremopterix leucotis* (Stanley) have hitherto been known as *E.l.smithi* (Bonaparte) ranging from South West Africa to Portuguese East Africa and Northern Rhodesia. Little attention has been given to the moults and plumages of this lark, but it appears that there are two quite distinct female plumages, one with a blackish upperside in which the feathers have light edges and another with a reddish upperside with slight dark mottling. When series are compared from various areas, it is obvious that the birds commonly placed under *smithi* are not all alike. Typical *smithi* was described from the north Transvaal, and birds from South West Africa can be separated by their female characters.

***Eremopterix leucotis hoeschi*, subsp. nov.**

Description: Males hardly separable from those of *smithi* but averaging a little whiter on the upper tail coverts. Females quite distinct; dark backed females with the feather edges lighter and greyer; red backed females much lighter and brighter.

Type: Female collected in Okahandja, South West Africa on 21st February, 1958 by W. Hoesch. In my collection.

Remarks: Six examples compared with a long series of *smithi*. Named after Mr. W. Hoesch to whom I am indebted for collecting the specimens.

The Validity of the Genus *Megaloprepia* Reichenbach

by MR. DEREK GOODWIN

Received, 10th December, 1958

In the light of Cain's recent revision of the genus *Ptilinopus* (Cain 1954), the validity of the genus *Megaloprepia* must be questioned. *Megaloprepia* was first used (Reichenbach 1852) for the species *magnifica* (Temminck). Later the genus was defined by Salvadori, when he separated the two species *magnifica* and *formosa* (G. R. Gray) from *Ptilopus* (now *Ptilinopus*) on the characters: "under wing-coverts yellow; tail rather long and rounded, first primary not attenuated at the tip" (Salvadori 1893). Some of the species now included in *Ptilinopus* also have these features. Nor are there any other characters, common to both *formosa* and *magnifica*, which would serve to separate them.

The colours and colour-patterns of *formosa* and *magnifica* agree well with those found within *Ptilinopus*. Their rather long, rounded tails set them apart from many *Ptilinopus* species but *P. subgularis* Meyer and Wigglesworth agrees perfectly with them in this respect. As has been shown elsewhere (Cain 1954), *subgularis* cannot be generically separated from the other *Ptilinopus* species. I therefore think that *formosa* and *magnifica* must be placed in *Ptilinopus*. *Megaloprepia* becomes a synonym of *Ptilinopus*. Dr. A. J. Cain, with whom I have discussed this matter and examined specimens, agrees with this decision.

References:

Cain A. J. (1954) Subdivisions of the genus *Ptilinopus* (Aves, Columbae) Bull. Brit. Mus. (Nat. Hist.) Zool., vol. 2, No. 8.

Reichenbach, L. (1752) Avium Systema Naturale, p. 26.

Salvadori, T. (1893) Cat. Birds Brit. Mus., vol. 21, p. 70.

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

17th March, 21st April, 19th May, 15th September, 20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Twenty-one Shillings Annually. Two Shillings and Sixpence per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

Room

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PURCHASED
-3 APR 1959

BRITISH MUSEUM
NATURAL HISTORY

Edited by
Dr. JEFFERY HARRISON

Volume 79
No. 4

April
1959

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PUR[illegible]
- 3 APR 1959

Volume 79

Number 4

Published: 1st April, 1959

BRITISH MUSEUM
NATURAL HISTORY

Owing to the B.O.U. Centenary Dinner, no joint meeting was held in March.

Nomadism, Breeding and Subspeciation in some African Larks

by MR. C. M. N. WHITE

Received 2nd December, 1958

The present discussion has been largely suggested to me by a reading of some of Dr. A. Keast's recent papers on nomadism and its implications in respect of certain Australian birds. The basic conclusions which he draws are that sedentariness favours the development of racial variation; nomadism, gregariousness and irregular breeding tend to accelerate gene flow and limit geographical variation. Since certain African larks exhibit similar patterns of mobility, gregariousness and irregular breeding in varying degrees it seems worth while testing his hypotheses in a different continent.

Some consideration must first be given to nomadism in relation to migration. Where a bird has a well marked breeding range and winters regularly in a different area, passing between the two annually and in a more or less predictable manner, there is no difficulty in describing such behaviour as migration. In other cases however no such regularity can be perceived, and although movements are present and often called migrations, they appear to be less precise and may fluctuate from year to year in a way which suggests dispersal or wandering nomadic behaviour rather than regular migration. I do not imply that this distinction is an absolute one, but merely that it provides a useful base line from which to work.

Application of the hypothesis to African larks.

Most African larks are resident and static, but there are certain well marked exceptions provided by *Mirafra nigricans* (Sundevall), *Calandrella cinerea* (Gmelin) and some species of *Eremopterix*. This is also probably true of some other species of *Calandrella* but data is too imperfect to make discussion very useful. In the case of *M.nigricans* and *C.cinerea* at least their behaviour is very often described as migratory.

M.nigricans.

This species occurs over an area extending from the Orange Free State and Zululand to the Katanga and west Tanganyika. Mobility over this area is well known, but there is no agreement on the precise breeding and non-breeding ranges. Grant and Praed (East African Handbook of Birds. ii. p. 21) evidently consider that it breeds in the south of its range and winters in the north. Winterbottom (Ostrich 1957. 240–41; and 1958. 88) takes the same view. He states that there is no breeding record from north of the Zambezi, and that birds from Northern Rhodesia with enlarged gonads in August and September would on this view have been on passage southwards.

Actually the picture is less simple than this. Verheyen (Exploration du Parc National de l'Upemba. Oiseaux. 1953. 424) lists a male with enlarged gonads from Upemba in mid July and a juvenile on 18th August. He states that it is probably a dry season breeding visitor there between June and October. Lynes also collected a female near breeding at Dilolo in September and Neave a young male in the Katanga in October. Benson (Ibis 1956. 601.) has listed an immature from Kasama in Northern Rhodesia in November, and a male in aerial song flight at Kawambwa in September. I have collected birds with fairly enlarged gonads at Mwinilunga in June and July. A juvenile at Upemba in August and an immature in the Katanga in October as well as the evidence of the gonads of other birds makes it fairly certain that some breeding must occur in this part of Africa in the latter part of the dry season.

In Southern Rhodesia however the breeding records in the Check List (Smithers et al. 1957) lie in the main between November and January, and suggest a later breeding season there. The single breeding record from Zululand if authentic is for September.

The evidence of movements is far from clear; in Northern Rhodesia there are records for practically every month of the year although dry season records predominate. In contrast there is only a single Nyasaland record (May). Although it breeds in Southern Rhodesia it appears to be absent there from July to September when it is evidently breeding in the southern Belgian Congo. Dr. Rosa Pinto (in litt.) informed me that in 1955 great numbers appeared in flocks in southern Mozambique, and that they were apparently all males. Three specimens which he generously sent to me were all in post breeding moult with new body plumage largely assumed but the wing still composed of old feathers except for the inner primaries which had been renewed. These were collected in February.

M.nigricans has a northern race *erythropygia* (Strickland) breeding north of the equator. Serle (Ibis 1957. 628) has noted that at Onitsha in southern Nigeria it breeds from December to March, and then seems to migrate north with the advent of rains. Lynes met with fresh plumaged individuals in Darfur in October, and Buchanan collected birds completing moult in southern Air in mid August. Butler thought that it nested from January to March in the Bahr-el-ghazal, and juveniles are recorded from Uganda in February and Nigeria in April. The inference is that *erythropygia* breeds nearer to the equator and migrates away from it. The evidence for *nigricans* is less clear but it seems clear that it does breed near to the equator and that many of the birds recorded far from the equator are non breeding birds, and that they may irrupt in large quantities in some years into places where they are otherwise scarce. It seems possible that the behaviour of *M.nigricans* is nomadic rather than migratory; no geographical variation in either northern or southern race has been demonstrated which may be significant; and some though not all the populations of it breed in the dry season.

C.cinerea.

The Red capped Lark is well known to have movements in part if not throughout its range. In the race *saturatior* records from Northern Rhodesia are mainly July–October, in Nyasaland July–September, and in Southern Rhodesia March–November. It is thus a dry season breeding visitor to these areas. Records from the Kasai in September and February and lake Edward in January and April may suggest that it migrates north towards the equator, though it has been recorded near the Kivu volcanoes in August. Verheyen collected breeding birds from May to July at Upemba and I have breeding birds from Mbeya in southern Tanganyika collected in July by J. G. Williams. Since *saturatior* seems not to move south of the Limpopo although it disappears from the country between the Limpopo and the Katanga during the rains, there is at least a suggestion of migration towards the tropics.

In Bechuanaland dark birds identified with *anderssoni*, and very pale whitish backed birds occur together over a considerable area, at any rate during the dry season. Evidence that these two quite distinct types have separate breeding ranges is lacking, although Clancey (Bull. B.O.C. 1958. 116) has suggested that the dark birds breed on alluvial soils and the pale birds on saline soils and pans. The pale birds are not known outside this area for *spleniata* of the Namib is a sandy pale backed bird, whilst the Bechuanaland birds are more greyish white above. Hoesch obtained both pale and dark birds at Etoscha pan in northern South West Africa, and the pale birds from there have been named *ongumaensis* Grant and Praed. I have examined these specimens in the British Museum, and they appear to be a rather inconsistent and worn series not very different from *anderssoni*.

Clancey (l.c.) believes that *anderssoni* has a limited breeding range, and wanders widely outside it. This is quite possible, but it is equally likely that this nomadism is not between a regular breeding area and elsewhere, but is of a more irregular nature. Mr. M. P. Stuart Iwrin has informed me that in 1958 *C.cinerea*, usually common in Matabeleland in the dry season, was virtually absent.

Opinion varies greatly about the distinctness of the various named races of *C.cinerea;* in south and central Africa nominate *cinerea*, *saturatior* and *spleniata* seem on the whole well marked. The other supposed races are not well marked. One may of course select uniform series from specimens, claim that these represent a stable race, and explain away the inconstant or conflicting birds as non breeding visitors from other areas. The temptation to do this is facilitated by the fact that many specimens are collected from non breeding flocks. On the other hand in north western Northern Rhodesia where *saturatior* is the normal breeding form, some breeding birds are quite unlike it, and resemble *anderssoni* more closely which suggests that there may be movement of populations between actual breeding areas.

More adequate field data about breeding populations with adequate samples of the breeding populations is needed to clear up the facts. But it is worth considering that part of the doubts about the races and their ranges in this species may be due to gregarious nomadism combined with dry season breeding causing birds to breed in different areas in different years, especially since much of the range is dry in any case, and may in abnormal years be too dry to suit breeding. If as seems likely no clear cut separate breeding areas for pale and dark birds can be defined in Bechuanaland one is not dealing with the normal pattern of geographical variation. The variations may have evolved separately and later been affected by wandering and now co-exist, or they may represent phases which are ecologically segregated but have no separate geographical ranges. On present knowledge I would regard *C.cinerea* as a species which fulfills Keast's category of nomadic gregarious birds with poorly marked racial variation.

Eremopterix.

All the finch larks are as a rule found in dry or very dry country. *E.leucotis smithi* has a wide range in south and central Africa but is not very well documented as to movements. In Southern Rhodesia is said to be resident in Matabeleland, and to wander elsewhere, and breeding is reported for March, August, and October to December. In Nyasaland there is no definite data about movements but breeding is known from April to September during the dry season. Information for Northern Rhodesia is very unsatisfactory to define its status but I have January records of flocks at the Zambezi-Luangwa confluence where I have seen no trace of it in August, September and November; although Grimwood and Benson have found it very abundant on the Kafue flats at the end of the rains and beginning of the dry season, I saw no trace of it in the same places in December. Although information is so unsatisfactory there is at least no doubt that *E.leucotis* is gregarious and given to irregular movements which can be described as nomadic, and it likewise shows little geographical variation compared with most larks.

Discussion.

Any conclusions from the foregoing data must be qualified by the fact that we have far less data than is really needed about the breeding dates and movements of the three species concerned. But the following facts can be established.

i. all three have movements of a perceptible kind which may be called nomadism rather than migration.

ii. all three species are abnormal in breeding largely in the dry season compared with other larks.

iii. all three species exhibit a low degree of geographical variation, showing either only two well marked and isolated races (*M.nigricans*), or 4–5 over the whole Ethiopian region (*E.leucotis*), or few (about 5 in my view) well marked races in south, central and east Africa (*C.cinerea*). Sedentary larks show much more variation; *Mirafra africana* has about 15 races in south, central and east Africa; *M.africanoides* at least 10 in the same parts of Africa; *M.sabota* about 9 in southern and west central Africa; *M.apiata-rufocinnamomea* superspecies about 17 from south to east Africa.

It seems then that Keast's hypotheses tested in this way have some validity for African larks, and would be well worth testing for other

African birds since they provide an important new theoretical contribution to the study of bird subspeciation.

Postscript: since this note was completed Mr. M. P. Stuart Irwin has informed me (in litt.) that there are no dark alluvial soils in Ngamiland or on the Okovango delta which would provide a localised breeding place for a supposed dark *anderssoni.* He adds that the Okovango delta does not in any case provide suitable terrain for *C.cinerea,* that the soils there are all sandy, and that away from this restricted area there are only the usual Kalahari sands.

References:—
Keast A. Emu 58 (3) p. 207. 1958.
Austr. Jnl. Zool. 6. p. 53. 1958

The South African Races of the Cape Batis *Batis capensis* (Linnaeus)

by MR. P. A. CLANCEY

Received 2nd December, 1958

The handsome and markedly sexually dimorphic Cape Batis or Cape Flycatcher *Batis capensis* (Linnaeus) is an inhabitant of both lowland and highland evergreen forest, and in the Cape Province and Natal occurs in suitable localities at all elevations from sea level to about 5000–6000′ altitude. Immediately to the northward of Natal it becomes restricted to montane evergreen forest, with the result that its distribution in the east is highly disrupted. This fragmentation of the range has favoured the formation of localized races, but it is only very recently that the full nature of this geographical variation has become adequately known and understood. Roberts, *Birds of South Africa,* 1940, p. 284, recognised only two races from within South African limits, namely, *B.c.capensis* (Linnaeus), 1766: Cape of Good Hope, and *B.c.erythrophthalma* Swynnerton, 1907: Chirinda Forest, Mt. Selinda, eastern Southern Rhodesia, and this arrangement was followed by Vincent, *Check List of the Birds of South Africa,* 1952, p. 68. Recent work by the writer, *vide Annals of the Natal Museum,* vol. xii, 2, 1952, pp. 257–258, resulted in the description of *B.c.hollidayi* Clancey, 1952: Gwaliweni Forest, Lebombo Mountains, north-eastern Zululand, and by Smithers and Paterson, *Bull. B.O.C.,* vol. 76, 7, 1956, p. 119, of *B.c.kennedyi* Smithers and Paterson, 1956: Mchabezi Valley, Matopos, western Southern Rhodesia.

Through the kindness of Dr. J. M. Winterbottom, of the South African Museum, Cape Town, a series of seventeen specimens of the topotypical populations of *B.c.capensis* has been available for study. The typical race, as understood on the basis of topotypes, is characterized by the fact that in both sexes the slate-blue of the head-top and nape is sharply demarcated from the raw umber of the mantle and rump, while the female has the broad pectoral band and the sides of the body and flanks a rich amber brown. Of the topotypical populations, I have seen specimens from near Calvinia, Somerset West, Worcester, Caledon, Grootvadersbosch (near Swellendam), Sevenweekspoort, Laingsburg, Kammanassie Mountains, Stillbaai, Knysna, etc., and populations agreeing subspecifically with the topotypical ones range east to about the valley of the Great Fish River in the eastern Cape Province. The fine eastern Cape series in the collection of the East London Museum, kindly loaned for this enquiry by the Director, Miss M. Courtenay-Latimer, shows a marked shift of the subspecific characters in the populations resident in the eastern Cape towards a form in which the mantle and rump are brownish olive in both sexes, and with a narrower breast band and more white over the abdomen in the female than in topotypical *B.c.capensis*. While most of the eastern Cape populations are, strictly speaking, intermediate between the two racial groups of populations, the olive-backed form certainly becomes dominant in East Griqualand, Pondoland, and occurs throughout Natal, Zululand, Swaziland, eastern Orange Free State, and the Transvaal. For this race, *B.c.hollidayi* mihi, 1952, proposed for the isolated Lebombo Mountains population, is available, because as a result of further study of the series in the Durban and Natal Museum, I do not now consider the Lebombo populations as subspecifically distinct to those of adjacent Natal, western Swaziland, and the eastern and northern Transvaal forests. In the transitional zone between *B.c.capensis* and *B.c.hollidayi*, it is interesting to observe that the umber brown mantle and rump colouration (characteristic in part of *B.c.capensis)* is present in the samples of the populations of the southern Transkeian forests available to me (Manubie Forest), whereas the narrower pectoral band and whiter ventral surface, characteristic in part of the female *B.c.hollidayi*, is already dominant in populations occurring considerably further south, *i.e.*, those resident in the region of the Sundays River. This is adequately demonstrated by the good sample from the farm Ferndale, in the Patensie district, near Port Elizabeth, in the collection of the East London Museum. The irregularity in the stepping of the character gradients makes the fixation of the limits of the respective ranges of *B.c.capensis* and *B.c.hollidayi* a task of some difficulty.

Study of the series of skins in the National Museum of Southern Rhodesia, Bulawayo, shows that *B.c.erythrophthalma* of the eastern highlands of Southern Rhodesia is rather similar dorsally to *B.c.hollidayi*, but in both sexes the slate-blue of the head-top and nape merges insensibly into the greyer olive of the mantle and rump, and is not sharply demarcated as in *B.c.capensis* and *B.c.hollidayi*. The female of *B.c.erythrophthalma* has a broader pectoral band and darker sides to the body sides and flanks than *B.c.hollidayi* and is actually inseparable from *B.c.capensis* on the ventral surface. *B.c.erythrophthalma* has a very restricted distribution in eastern Southern Rhodesia, ranging from Mt. Selinda (Chirinda Forest) north to the Vumba Highlands, and in immediately adjacent Portuguese East Africa. Smithers and Paterson, *loc.cit.*, have recently shown that in the Matopos Hills of Southern Rhodesia occurs a small isolated population with distinctive characters, which they describe as *B.c.kennedyi*. This race is paler and purer and more uniformly greyish above than *B.c.erythrophthalma*. Ventrally, the female shows more white (in this respect not unlike *B.c.hollidayi*), while both sexes have paler and more restricted amber brown on the sides of the body and flanks. *B.c.kennedyi* also averages slightly larger than *B.c.erythrophthalma*. Smithers and Paterson considered *B.c.kennedyi* to be restricted to the Matopos Hills, but subspecifically similar populations are now known to occur to the northward of *B.c. erythrophthalma* in the north-eastern Southern Rhodesian highlands (Inyanga) (see S.A.O.S. List Committee Report, *Ostrich*, vol. xxix, 1, 1958, p. 38, and McLachlan and Liversidge, *Roberts' Birds of South*

Africa, 1957, p. 360). The two populations of *B.c.kennedyi* are completely isolated from one another by unsuitable intervening country (see map)

About five other races occur extralimitally, but need not be discussed here. From the South African sub-continent four geographical races of *Batis capensis* can be admitted, as follows:

(*a*) *Batis capensis capensis* (Linnaeus)

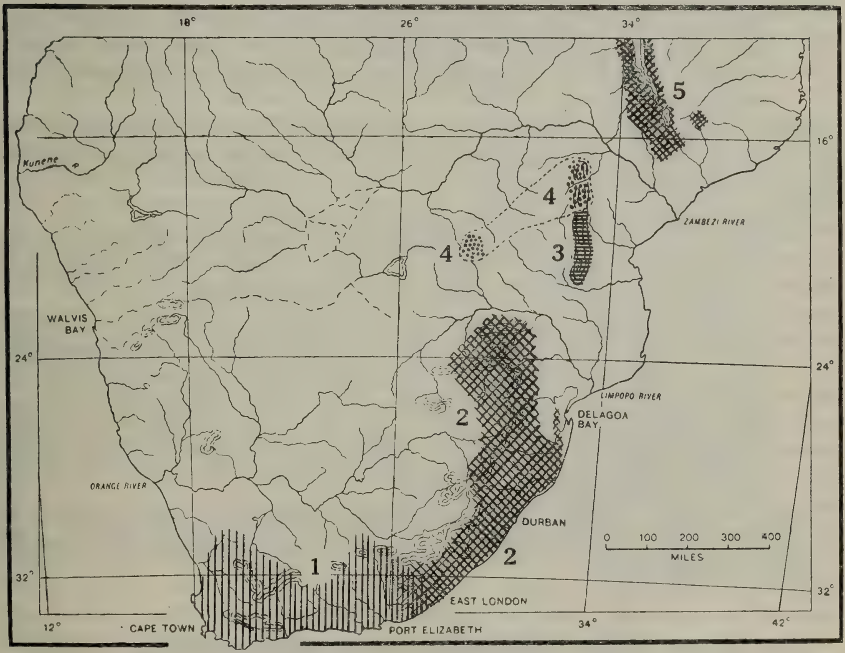
Muscicapa capensis Linnaeus, *Systema Naturae*, 12th edition, 1, 1766, p. 327: Cape of Good Hope, South Africa.

♂ ad. Head-top and nape slate-blue, sharply demarcated from the mantle and rump, which are Raw Umber (Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. iii). Sides of body and flanks Amber Brown (pl. iii). ♀ ad. Similar to male on upper-parts, but markedly different below, the pectoral band Amber Brown, as against glossy black in the male, and with the centre of the throat Amber Brown. Wings 57.5–63 mm.

Range: South-western, southern and eastern Cape Province, eastwards to the Great Fish River. In the west north as far as Calvinia and in the east north to Colesberg. Intergrades with the next subspecies to the east of its stated range.

(*b*) *Batis capensis hollidayi* Clancey

Batis capensis hollidayi Clancey, *Annals of the Natal Museum*, vol.


18°
26°
34°
16°
Kunene
5
4
4
3
ZAMBEZI RIVER
WALVIS BAY
24°
24°
2
LIMPOPO RIVER
DELAGOA BAY
ORANGE RIVER
DURBAN
0 100 200 300 400
MILES
2
1
32°
32°
EAST LONDON
12°
CAPE TOWN
PORT ELIZABETH
34°
42°

Batis capensis (Linnaeus)

Sketch map showing the ascertained ranges of five geographical races of the Cape Batis in southern and south-eastern Africa.

1. *B.c.capensis* (Linnaeus). 2. *B.c.hollidayi* Clancey.
3. *B.c.erythrophthalma* Swynnerton. 4. *B.c.kennedyi* Smithers and Paterson.
5. *B.c.dimorpha* (Shelley).

xii, 2, 1952, p. 257: Gwaliweni Forest, Lebombo Mountains, north-eastern Zululand, South Africa.

Differs from *B.c.capensis* in having the mantle and rump less rich brown, being about Brownish Olive (Ridgway, pl. xxx) in both sexes. ♂ with slightly paler Amber Brown on sides of body and flanks, and ♀ with narrower and lighter pectoral band, and rather lighter and less extensively distributed Amber Brown on sides of body and flanks, thereby exposing more white ventrally than *B.c.capensis*, Throat spot rather paler. Similar in size. Wings 57.5–64 mm.

Range: East of the range of *B.c.capensis* in the eastern Cape Province, and throughout East Griqualand and Pondoland, and in Natal and Zululand, extreme southern Sul do Save, southern Portuguese East Africa (Lebombo Mountains), Swaziland, eastern Orange Free State, and in the eastern and northern Transvaal highland forests.

(*c*) *Batis capensis erythrophthalma* Swynnerton.

Batis capensis erythrophthalma Swynnerton, Bulletin of the British Ornithologists' Club, vol. xix, 1907, p. 109: Chirinda Forest, Mt. Selinda, Melsetter district, eastern Southern Rhodesia.

More uniform on the upper-parts than *B.c.hollidayi* owing to the heavy overlay of grey on the mantle and rump, which surfaces are not sharply demarcated from the slate-blue head-top and nape. Ventrally, ♂ similar to *B.c.hollidayi*, but ♀ with a broader and darker pectoral band, and darker Amber Brown to sides of body and flanks, resulting in an exposure of less white than in *B.c. hollidayi*, and in this respect similar to *B.c.capensis*. Similar in size. Wings 58–63 mm.

Range: Highland evergreen forests of eastern Southern Rhodesia, from Mt. Selinda, Melsetter district, north to the Vumba Highlands, and in adjacent Portuguese East Africa.

(*d*) *Batis capensis kennedyi* Smithers and Paterson.

Batis capensis kennedyi Smithers and Paterson, *Bulletin of the British Ornithologists' Club*, vol. 76, 7, 1956, p. 119: Mchabezi Valley, Matopos Hills, western Southern Rhodesia.

Lighter slate-blue on head-top and nape, and still greyer over the mantle and rump than *B.c.erythrophthalma*. On under-parts whiter, with lighter and less extensive Amber Brown on sides of body and flanks, and the female with a narrower pectoral band. Tawny wing-bar and tawny edges to tertials paler. Averaging slightly larger in size. Wings ♂♂ av. 65.7, ♀♀ av. 62.5 mm. (after Smithers and Paterson, *loc.cit.*).

Range: Occurs in two widely separated populations; one restricted to the Matopos Hills, and the other to the north-eastern highlands (Inyanga) of Southern Rhodesia.

The Races of the Robin-Chat *Cossypha natalensis* Smith

by Mr. P. A. Clancey

Received, 11th November, 1958

In my study of geographical variation in the South African sub-continental populations of the wide-ranging Natal Robin-Chat *Cossypha* *natalensis* A. Smith, 1840: near Port Natal, *i.e.*, Durban, Natal, South Africa, I suggested that further collecting and study might necessitate the recognition by specialists of five or six nomenclaturally recognisable races (*vide Bull. B.O.C.*, vol. 76, 7, 1956, pp. 115–119). Since preparing the 1956 report, I have been able to study the entire series of *C.natalensis* in the collection of the British Museum (Nat. Hist.), which confirms that the species is not monotypic, as still believed by most workers, but is in actual fact divisible into six subspecies on both structural and plumage colour characters. Mearns, *Smithsonian Miscellaneous Collections*, vol. lxi, No. 20, 1913, p. 2, working with very restricted material, was the first to demonstrate the existence of subspecific variation in this robin-chat, when he separated *C.n.intensa* Mearns, from Taveta, south-eastern Kenya Colony, and *C.n.garguensis* Mearns, from Mt. Uraguess, Matthews Range, central Kenya Colony. Mearn's taxa have had little or no support from later workers on East African birds, notably van Someren, Friedmann, Mackworth-Praed and Grant, Sclater, *et al.*, but in a short note in the *Durban Museum Novitates*, vol. iv, 1, 1952, 14–17, I tentatively supported *C.n.intensa* and *C.n.garguensis*, and described an additional race, *C.n. hylophona* mihi, from Chinteche, Nyasaland.

Critical study of the British Museum series in the light of my earlier findings on the South and East African populations, based on the collections of the Durban and Natal Museums, the Transvaal Museum, Pretoria, the Museu Dr. Alvaro de Castro, Lourenço Marques, the National Museum of Southern Rhodesia, Bulawayo, and the Coryndon Museum, Nairobi, shows that the populations of this species are broadly divisible into two groups on the colouration of the head-top. In the populations occurring in the western and southern sectors of the species' range the head-top is about Raw Umber (*vide* Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. iii), whereas the populations of central and eastern tropical Africa have the head-top about Amber Brown (same pl.). Where they meet, the ranges of the two groups interdigitate to a certain degree, rufous-headed *C.natalensis* ranging well to the southward of the main populations in the highland evergreen forests of eastern Southern Rhodesia, where they form an enclave of *C.n.hylophona*. These isolated populations of *C.n.hylophona* are flanked on three sides by the dark-headed *C.n.egregior* Clancey, which is a lowland form.

The nominotypical race has a limited range in the austral parts of the range of the species. In the eastern Cape Province it has been noted from as far south as Grahamstown, King William's Town and East London, and more frequently from the forested Pondoland coast. It is widely distributed in Natal and Zululand, mainly below 2,000 ft. a.s.l., and occurs also in Sul do Save from Lourenço Marques southwards, and in the eastern and northern Transvaal highland forests. *C.n.natalensis* is characterized by the dark Raw Umber head-top, which is more or less sharply demarcated from the Sudan Brown Antique Brown of the nape and mantle, and by the rich Mars Yellow (pl. iii) of the ventral surface.

To the north of the range of *C.n.natalensis* occur rather duller coloured populations, which have recently been described by me as *C.n.egregior*, the *Type* from Manhiça, Sul do Save, southern Portuguese East Africa. The range of this race is now fairly well understood, and is much more extensive than believed when the race was named in 1956. *C.n.egregior* ranges from about the Komati River in the eastern Transvaal "low-veld" and Sul do Save, throughout most of southern Portuguese East Africa, and extending into the south-eastern low country of Southern Rhodesia, and up the valley of the Zambesi to at least that river's confluence with the Machili River. North of the delta of the Zambesi it intergrades with *C.n.intensa*, which is also a lowland form. *C.n.egregior* differs from the nominate race in its rather less richly coloured upper-parts, the slate blue of the sides of the back and the scapulars being distinctly darker, and on the under-parts the Mars Yellow of *C.n.natalensis* is replaced by light Raw Sienna (pl. iii), and the throat is markedly pale. There is no difference in size.

The third assemblage of dark-headed populations is to be found in western and northern Angola northwards to the Portuguese Congo, the Gaboon, and, perhaps, the Cameroons. These populations most closely resemble *C.n.egregior*, but differ in being still darker bluish slate on the sides of the back and scapulars, more yellowish below (about Cadmium Yellow/Raw Sienna (pl. iii)), while the tail is much shorter, thus:— ♂♂ 67.5–70, ♀♀ 60–66.5, as against 73–82.5, 69–78 in *C.n.natalensis*, and 74.5–78, 70–75 mm. in *C.n.egregior*. Dr. Wilhelm Meise, *Abhandl. Verhandl. Naturwiss. Vereins. Hamburg*, N.F. Band ii, 1957 (1958), pp. 73–74, has rightly elevated these discrete populations to full racial status by giving them the name *C.n.larischi* Meise, 1958: Canzêle, Cuanza Norte, northern Angola.

As noted earlier in this paper, the populations of the Natal Robin-Chat resident in the highland evergreen forests of eastern Southern Rhodesia have the head-top Amber Brown. These isolated populations agree with those of the Nyasaland highland forests separated by me, in 1952, as *C.n.hylophona*, the *Type* from Chinteche. The material of this race in the British Museum collection is fairly extensive (about 35 skins) and enables a reasonably accurate range to be defined for it. *C.n.hylophona* ranges from the forests of the eastern Southern Rhodesian highlands, and forested highland Nyasaland northwards to Tanganyika Territory (except littoral, where *C.n.intensa* occurs, and some eastern mountain ranges, *e.g.*, Eastern Ulugurus, Pugu Hills, etc., where intergrading *C.n.hylophona* ⪌ *C.n.intensa* populations are found), the Kenya Colony highlands, most of Uganda and the Belgian Congo. Two female specimens collected by the recent British Museum Expedition to Angola on the Luau River, Teixeira de Sousa, on 29th July, 1957, appear to me to be inseparable from *C.n. hylophona*. From *C.n.natalensis, C.n.egregior and C.n.larischi*, the race under discussion is distinguishable by the Amber Brown head-top, redder mantle centre and brighter rump. The under-parts are frequently more richly coloured than even in *C.n.natalensis*. There is no statistically significant difference in size.

C.n.intensa Mearns is rather difficult to discuss in the absence of paratypical material and a satisfactory comparative diagnosis. As far as can be ascertained, this name is applicable to the more brilliantly coloured *C.natalensis* populations resident on the littoral and immediate hinterland of East Africa, from about the valley of the Webi Shebli, Somalia, south to Mozambique, northern Portuguese East Africa. It also occurs on Mafia Island, where the populations are very typical, but not on Zanzibar, where, in the Jozani Forest, *C.n.hylophona* occurs. *C.n.intensa* differs from *C.n.hylophona* by its brighter dorsal aspect: the head-top is slightly lighter, and the nape and mantle centre are more orange-coloured, and the rump and upper-tail-coverts are more orange, and lack the olive wash present in *C.n.hylophona*. In *C.n.intensa* the bill is usually more massive and the culmen arched than in the other races. The culmens of 9 ♂♀ of this race measure 19–22.5, as against 18.5–20 mm. in Nyasaland topotypes of *C.n.hylophona*.

C.n.garguensis Mearns was based on a single skin from Mt. Uraguess, in the Matthews Range, central Kenya Colony, and no further specimens from the type-locality have been taken by collectors. It seems most unlikely that the tiny population of this robin-chat on the isolated forested top of Mt. Uraguess could represent a distinct local race confined to the type-locality, and I intend to use the name *C.n.garguensis* for the subspecifically discrete populations of the whole of southern Equatoria, Sudan, the highlands of southern Abyssinia and adjacent parts of northern Uganda and Kenya Colony. These populations most closely resemble *C.n. hylophona*, but differ on account of the duller and more uniform upper-parts. The head-top of *C.n.garguensis* is about Sudan Brown and is more or less concolorous with the nape, mantle centre and rump, and this tendency to uniformity on the dorsal surface is accentuated by the loss of much of the slate-blue on the sides of the back, thereby exposing more red-brown. In the other races of *C.natalensis* the blue-grey on the sides of back and scapulars meets across the middle of the back without entirely obscuring the red-brown dorsal stripe.

Six races of the Natal Robin-Chat *Cossypha natalensis* can now be admitted in our formal taxonomic treatment of the species, and the nomenclature, characters and ranges of these are as follows:

1. *Umber-crowned Races*

(*a*) *Cossypha natalensis natalensis* Smith

Cossypha natalensis A. Smith, *Illustrations of the Zoology of South Africa*, Aves, 1840 pl. lx (and text): near Port Natal, *i.e.*, Durban, Natal, South Africa.

Head-top Raw Umber; nape and mantle centre between Sudan Brown and Antique Brown, the sides of the back and scapulars bluish-slate, this colour tending to meet across the back and obscure the reddish brown dorsal stripe. Rump Amber Brown with olive wash. Ventral surface about Mars Yellow. Wings 15 ♂♂ 88–96 (92.6), tails 73–82.5 (78.4), 9 ♀♀ 83–91.5 (86.7), 69–78 (72.9) mm.

Material examined: 70.

Range: From about the Albany district of the eastern Cape Province to Natal and Zululand, extreme southern Sul do Save, southern Portuguese East Africa (to the southward of Lourenço Marques), and the eastern and northern Transvaal highland forests.

(*b*) *Cossypha natalensis egregior* Clancey

Cossypha natalensis egregior Clancey, *Bull. B.O.C.*, vol. 76, 7, 1956, p. 118: near Manhiça, Sul do Save, southern Portuguese East Africa.

Duller and less richly coloured on the upper-parts than *C.n. natalensis*, the slate-blue of the sides of the back and scapulars darker. On under-parts light Raw Sienna, and with the throat markedly pale. Similar in size. Wings 6 ♂♂ 90–93 (91.5), tails 74.5–78 (75.9), 8 ♀♀ 83.5–90 (86.7), 70–75 (72.5) mm.

Material examined: 25.

Range: Sul do Save, southern Portuguese East Africa, the eastern Transvaal "lowveld" from about the Komati River, and the low country of south-eastern Southern Rhodesia between the Bubye and Sabi Rivers, northwards to the Portuguese districts of Tete, Manica and Sofala (on the Zambesi west to the Machili-Zambesi confluence, Northern Rhodesia), the lowlands of Southern Nyasaland, and in Zambezia, Northern Portuguese East Africa, north of which it intergrades with *C.n.intensa.*

(*c*) *Cossypha natalensis larischi* Meise

Cossypha natalensis larischi Meise, *Abhandl. Verhandl. Naturwiss. Vereins. Hamburg*, N.F. Band ii, 1957 (published 1958), p.73: Canzêle, Cuanza Norte, northern Angola.

Very similar to *C.n.egregior* on the upper-parts, but still darker blue-grey on the sides of the back and scapulars. Below distinctly more yellowish (about Raw Sienna/Cadmium Yellow). Tail much shorter. Wings 3 ♂♂ 91–94.5 (93.3), tails 67.5–70 (69.1), 9 ♀♀ 84.5–90 (87.6), 60–66.5 (63.6) mm.

Material examined: 12.

Range: Western and northern Angola, northwards to the Portuguese Congo, the Gaboon, and, perhaps, the Cameroons. Also in adjacent parts of the Belgian Congo.

2. *Rufous-crowned Races*

(*d*) *Cossypha natalensis hylophona* Clancey

Cossypha natalensis hylophona Clancey, *Durban Museum Novitates*, vol. iv, 1, 1952, p. 15: Chinteche, Nyasaland.

Differs from *C.n.natalensis* in having the head-top near Amber Brown as against Raw Umber; nape and dorsal stripe redder than in *C.n.natalensis* (about Amber Brown); rump less washed with olive. On ventral surface, usually rather redder (Mars Yellow/Xanthine Orange). Similar in size. Wings 20 ♂♂ 88.5–101 (93.4), tails 71–82.5 (76.7), 14 ♀♀ 86–95 (88.8), 68–76 (71.8) mm.

Material examined: 68.

Range: Evergreen forests of eastern Southern Rhodesian highlands, highland forests of Nyasaland and adjacent Portuguese East Africa, northwards to Tanganyika Territory (except littoral, where *C.n.intensa* occurs, and some eastern mountain ranges, *e.g.*, Eastern Uluguru Mountains, Parè Mountains, Pugu Hills, etc., where intergrades between *C.n. hylophona* and *C.n.intensa* are found), Zanzibar Island, the highlands of Kenya Colony, most of Uganda, Ukerewe Island, Lake Victoria, and the eastern Belgian Congo. Perhaps also to parts of Northern Rhodesia. Two females in the British Museum from the Luau River, Teixeira de Sousa, Angola, seem attributable to this race.

(*e*) *Cossypha natalensis intensa* Mearns

Cossypha natalensis intensa Mearns, *Smithsonian Miscellaneous Collections*, vol. lxi, No. 20, 1913, p. 2: Taveta, south-eastern Kenya Colony.

Head-top lighter than in *C.n.hylophona;* nape and dorsal stripe more orange-coloured, and rump and upper tail-coverts lighter and more orange, the olive wash absent. Rather more fiery orange over the ventral surface. Bill heavier, the culmen being distinctly arched. Wings 8 ♂♂ 93.5–100 (96.5), tails 75–82.5 (79.1), 8 ♀♀ 88–94 (91.1), 68–75 (71.2) mm.

Material examined: 16

Range: Southern Somalia (Webi Shebeli) and the littoral and immediate hinterland of Kenya Colony and Tanganyika Territory, south to the district of Moçambique, northern Portuguese East Africa, and parts of south-eastern Nyasaland (10 m. S. of Mlanje boma; Mini Mini, Mlanje). Also on Mafia Island.

(*f*) *Cossypha natalensis garguensis* Mearns

Cossypha natalensis garguensis Mearns, *Smithsonian Miscellaneous Collections*, vol. lxi, No. 20, 1913, p. 2; Mt. Uraguess (Mt. Gargues), Matthews Range, central Kenya Colony.

Closely allied to *C.n.hylophona* from which it differs in being duller, browner and more uniform from head-top to base of tail. Blue-grey on sides of back reduced, resulting in an exposure of more Sudan Brown across the back. Wings 9 ♂♂ 92.5–100 (96.0), tails 73–84 (79.0), 4 ♀♀ 84.5–90 (86.9), 67–73.5 (70.0) mm.

Material examined: 13.

Range: Southern Sudan (Equatoria), highlands of southern Abyssinia, north-eastern Belgian Congo, northern Uganda and the northern half of Kenya Colony, south to about the Matthews Range.

Note on the Immature Plumage of the Honey-Guide *Melignomon zenkeri* Reichenow

by DR. WILLIAM SERLE

Received, 28th December, 1958

A male Honey-Guide obtained by me in secondary forest near Bakebe, 5°35′N, 9°32′E, altitude 600 feet, Mamfe Division, British Cameroons has the characters of *Melignomon* Reichenow and differs from a short series of adult *Melignomon zenkeri* obtained by Bates at Bitye, River Ja, French Cameroons, as follows:—

Above olive-yellow instead of olive-brown, the olive-yellow colour being imparted by the wide fringes of the feathers of the head, mantle, back, rump, upper tail coverts, and the primaries and secondaries with their coverts. Below from chin to under tail coverts pale greyish instead of pale buffish-brown, the breast washed with pale olive instead of yellowish-olive. The amount of white on the four outer pairs of rectrices is much greater. The outermost pair are white tipped with light brown, the brown tip extending 15 mm. along the outer web and 4 mm. along the inner web; the next pair are white narrowly edged with brown for 12 mm. from the tip along the outer web only; and the next two pairs are entirely white.

The plumage was fresh. The testes were small and the skull was partially ossified. Soft parts: feet orange-yellow; bill orange-yellow with irregular brownish areas.

Measurements: wing 75; tail 43; tarsus 16; bill 10 mm.

I think the specimen probably represents the hitherto unknown immature plumage of *Melignomon zenkeri* rather than a new but closely related species and Dr. Friedmann who kindly examined it agrees with this conclusion. The specimen has been deposited in the British Museum (Natural History), Brit. Mus. Reg. No. 1958–25–2. Collector's No. C.5911.

BRITISH ORNIT

INCOME AND EXPENDITURE ACCOUN

1957 £	EXPENDITURE	£ s. d.	£ s. d.
	"Bulletin" Vol. 78		
	Cost of publication, distribution, including Editor's Expenses	418 17 9	
	Less: Sales	83 6 3	
299			335 11 6
47	Notices etc. for Meetings		36 5 0
57	Postages, Projectionist and Miscellaneous Expenditure		33 3 9
5	Audit Fee		5 5 0
5	Contribution "Zoological Record"		5 5 0
£413			£415 10 3
16	Excess of Expenditure over Income, brought down		45 5 1
27	Surplus for the year carried to General Fund		35 2 8
£43			£80 7 9

BALANCE SHEET

£		£ s. d.	£ s. d.
	GENERAL FUND:		
1268	As at 31st December, 1957	1267 17 4	
	Less: Expenses re Trust Deed, Printing, Registration etc.	28 15 0	
		1239 2 4	
	Add: Surplus for the year	35 2 8	
			1274 5 0
	BULLETIN FUND:		
97	As at 31st December, 1957	96 9 3	
	Received during year	6 6 0	
			102 15 3
70	SUBSCRIPTIONS 1959 paid in advance		68 2 8
22	SUNDRY CREDITORS		24 6 0
1457			1469 8 11
	TRUST FUND:		
	(The Capital of this Fund may not be used. The Income from it is General Revenue.)		
1000	F. J. F. Barrington Legacy		1000 0 0
£2457			£2469 8 11

C. W. MACKWORTH-PRAED, *Chairman*
C. N. WALTER, *Hon. Treasurer*

We have examined the above Balance Sheet and Income and Expenditu
accordance therewith, and in our opinion correct.

FINSBURY CIRCUS HOUSE,
BLOMFIELD STREET, LONDON, E.C.2.
20th February, 1959.

OGISTS' CLUB

THE YEAR ENDED 31st DECEMBER, 1958

1957 £	INCOME	£ s. d.	£ s. d.
	SUBSCRIPTIONS:		
244	233 Members	244 13 0	
9	10 Associates	10 10 0	
			255 3 0
253			
	ENTRANCE FEES:		
41	11 Members	11 0 0	
—	1 Associate	1 0 0	
			12 0 0
103	INVESTMENT INCOME:		
	General Fund	54 2 6	
	Trust Fund	48 19 8	
			103 2 2
397			370 5 2
16	Balance, Excess of Expenditure over Income, carried down		45 5 1
£413			£415 10 3
43	Sales of "Bulletin" for previous years, *less* expenses		80 7 9
£43			£80 7 9

31st DECEMBER, 1958

£		£ s. d.	£ s. d.
	GENERAL FUND, INVESTMENTS:		
	4½% Defence Bonds, at Cost	1000 0 0	
	3% Savings Bonds 1960/70, at Cost	100 0 0	
		1100 0 0	
	Less: Reserve	20 0 0	
1080	(Market Value £1081)		1080 0 0
1	PROJECTOR, LANTERN & SCREEN—Nominal Value		1 0 0
1	STOCK OF "BULLETIN"—Nominal Value		1 0 0
	DEBTORS:		9 0 0
375	CASH AT BANK		378 8 11
1457			1469 8 11
	TRUST FUND, INVESTMENTS:		
1000	3½% War Stock £1399 11s. 0d. (Market Value £925)		1000 0 0
£2457			£2469 8 11

unt with the books and records of the Club and certify them to be in

W. B. KEEN & Co.,
Chartered Accountants.

BRITISH ORNITHOLOGISTS' CLUB

REPORT OF THE COMMITTEE

PURCHASED
- 3 APR 1959

MEETINGS

The Club held eight meetings during the year, including a joint meeting in March with the British Ornithologists' Union, and attendances totalled 406, the same as in the previous year.

MEMBERSHIP

The Committee very much regret to record the deaths during 1958 of Captain C. H. B. Grant, the Rev. K. Ilderton and Mr. W. H. Workman. There were four resignations and eleven new members joined the Club, making a total membership at the end of the year of 244.

FINANCE

The Accounts of the Club for the year 1958 are submitted herewith. As forecast a year ago the result is a deficit on the ordinary running of the Club of £45 5*s.* 1*d.* However, thanks to a splendid effort made by Mr. R. A. H. Coombes, he succeeded in effecting sales of old ''Bulletins'' which, after deducting expenses, amounted to £80 7s. 9*d.* After setting off the above mentioned deficit there remains a surplus for the year of £35 2*s.* 8*d.* to be carried to the General Fund. Expenses were lower for the year 1958 and an economy has been effected by including the cards for each meeting in the same envelope as that for the ''Bulletin''.

The Trust Fund was duly established during the year and the expenses, which will not recur, relating to the Trust Deed which governs the Fund, have been charged against the General Fund and not against income of the Club.

Once again two donations were received for the ''Bulletin Fund'' and the Club is grateful to the donors.

Commencing with the year 1959 the subscription for the ''Bulletin'' has been raised from £1 1*s.* 0*d.* to £1 10*s.* 0*d.* and following this, it may be possible to get through the year without a deficit.

C. W. Mackworth-Praed,
Chairman.

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 2/6 each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

21st April, 19th May, 15th September, 20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

CHASED
6 MAY 1959

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 5

May
1959

BULLETIN
OF THE
BRITISH ORNITHOLOGISTS' CLUB

Volume 79
Number 5
Published: 1st May, 1959

PURCHASED
- 6 MAY 1959

BRITISH MUSEUM
21
NATURAL HISTORY

Annual General Meeting

Chairman: Mr. C. W. Mackworth-Praed

The Sixty-seventh Annual General Meeting of the Club was held at 5.45 p.m. on Tuesday, 21st April, 1959, at the Rembrandt Hotel, Thurloe Place, London, S.W.7.

The Minutes of the last Annual General Meeting held on the 15th April, 1958 and the Report and Accounts for the year to the 31st December, 1958, were passed unanimously.

Mr. C. N. Walter stated that the deficit of £45 was entirely due to the loss of the claim for repayment of tax under the Deeds of Covenant and that there was no prospect of any claim being successful in the near future. Part of the loss should be made up in the coming year by the increase in the subscription to the Bulletin from one guinea to £1 10*s*. 0*d*., which should increase revenue by about £25 a year. On the other hand, the printers had warned him that if the demands for higher wages in the printing industry were successful, printing costs might rise by as much as 20%–25%. He asked authors to give special care to corrections which had involved the Club in considerable expense during the last twelve months. He pointed out that the B.O.U. in their Annual Report, made reference to the existence of the Trust Fund, and as the Club was now in a similar position he hoped that the attention of members would be drawn to this Fund.

Mrs. B. P. Hall raised the question of Honorary membership which was discussed at some length and referred back to the Committee for further consideration.

Mr. Macdonald suggested that consideration might be given to holding the dinners at the Imperial Institute, which he said could provide facilities at much lower cost, and the Hon. Secretary promised to look into the question.

The Chairman moved a vote of thanks to the Auditors, Messrs. W. B. Keen & Co., and to the Hon. Treasurer, Mr. C. N. Walter, for his good work during the year.

Captain C. R. S. Pitman proposed and Colonel O. E. Wynne seconded a vote of thanks to the outgoing Chairman.

ELECTION OF OFFICERS

Chairman: Captain C. R. S. Pitman, C.B.E., D.S.O., M.C.
Vice Chairman: Mrs. B. P. Hall.
Committee: Mr. P. A. D. Hollom, Mr. R. S. R. Fitter.
Hon. Treasurer: Mr. C. N. Walter (re-elected).
Hon. Secretary: Mr. N. J. P. Wadley (re-elected).

COMMITTEE 1959

Captain C. R. S. Pitman, C.B.E., D.S.O., M.C., Chairman (1959), Mrs. B. P. Hall, Vice-Chairman (1959), Mr. C. N. Walter, Honorary Treasurer (1950), Mr. N. J. P. Wadley, Honorary Secretary (1950), Dr. J. G. Harrison, Editor (1952), Miss T. Clay (1956), Mr. I. J. Ferguson-Lees (1958), Mr. P. A. D. Hollom (1959), Mr. R. S. R. Fitter (1959).

The Annual General Meeting was followed by the monthly meeting.

Chairman: Mr. C. W. MACKWORTH-PRAED.

Members present: 22. Guests: 2. Guest of the Club: Mr. R. K. Murton. Total: 26.

Wood Pigeon Movements and Migration

Mr. R. K. Murton gave a most interesting account of his researches, working for the Ministry of Agriculture. A full summary will appear in the September issue.

The South African Races of the Golden-tailed Woodpecker *Campethera abingoni* (Smith)

by MR. P. A. CLANCEY

Received 11th November, 1958

The Golden-tailed Woodpecker *Campethera abingoni* (A. Smith), 1836: Durban, Natal, ranges throughout the South African sub-continent from Natal and the valley of the Orange River northwards. It inhabits a variety of types of woodland, varying from evergreen forest to thornveld. Geographical variation is well-developed in the species, and between two and four races are generally admitted from within South African limits, in addition to approximately six extralimital forms. In spite of much competent work, the status of the South African races is still in a highly confused condition. Sclater, *Systema Avium Aethiopicarum*, part i, 1924, p. 296, admitted only two South African races of *C.abingoni*, but Roberts, *Birds of South Africa*, 1940, p. 183, admits four, including *C.a.annectens* (Neumann), 1908: Sambo, Benguela, Angola, a form which actually does not occur within our limits. Peters, *Check-List of Birds of the World*, vol. vi, 1948, p. 119, admits three races, as does Vincent, *Check-List of the Birds of South Africa*, 1952, p. 51, but this latter author synonymizes *C.a.anderssoni* (Roberts), 1936: Windhoek, South-West Africa, with *C.a.annectens*. In the *Ostrich*, vol. xxiv, 3, 1953, pp. 167–170, I review the geographical variation of this species in South Africa and recognise four named races, *viz.*, *C.a.abingoni*, *C.a.vibrator* mihi, 1953: Newington, eastern Transvaal, *C.a.smithii* (Malherbe), 1845: Marico, western Transvaal, and *C.a.anderssoni.* I also provisionally recognised as possibly worthy of naming another group of populations in northern Zululand and extreme southern Portuguese East Africa. This arrangement is followed by McLachlan and Liversidge, *Roberts' Birds of South Africa*, 1957, p. 240, while White, *Bull. B.O.C.*, vol. 77, 2, 1957, pp. 34–35, has reverted to earlier opinion in following Mackworth-Praed and Grant, *Bull. B.O.C.*, vol. lx, i, 1939, pp. 17–18, and *Birds of Eastern and North Eastern Africa*, vol. ii, 1952, pp. 759–761, in believing that the nominate race, described from Natal, ranges from that province northwards in the eastern littoral to most of central and eastern Tanganyika Territory, and that *C.a.vibrator* and *C.a.suahelica* (Reichenow), 1902: Grossaruscha, Tanganyika Territory, should be made synonymous with it. In order to resolve the vexed question of the South African races, their nomenclature and ranges, I have recently studied in great detail the entire collection of the British Museum (Nat. Hist.), London, as well as the material in the Natal and Durban Museums, the Transvaal Museum, and the National Museum of Southern Rhodesia. To the Directors of these institutions I tender my thanks for the facilities granted. This new study confirms my general arrangement of 1953, in which four named races of this woodpecker were admitted from within South African limits, and enables the characters and ranges of the races concerned to be given in much greater detail.

C.a.abingoni, as described by Dr. Andrew Smith in 1836 on the basis of specimens collected near Port Natal, *i.e.*, Durban, Natal, in 1832, is a small-sized and richly coloured race. In his original description, Smith describes the upper-parts as ''olive brown and golden green, with one or more pale yellow diamond shaped spots on each feather'', and the under-parts as ''straw yellow with . . . stripes''. It is important to note these points from the original description, because they are subspecifically diagnostic—the lack of a greyish overlay to the mantle, spotted rather than transversely barred upper-parts, and saturated under surface distinguish this race from the vicinal *C.a.vibrator*, which is, moreover, substantially larger. The bars on the tertials are also invariably incomplete. Of *C.a.abingoni*, I have had a series of 40 specimens for study, and find that this race is more variable than most, the material being divisible into two discrete colour groups: (a) those specimens in which the ground colour of the mantle is about Orange-Citrine (*vide* Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. iv), and that of the ventral surface Naples Yellow (pl. xvi), and (b) those in which the mantle ground colour is Warbler Green (pl. iv), and that of the under-parts Primrose Yellow (pl. xxx). Both colour phases occur in the same population, and appear to have no geographical connection whatsoever. In the *Annals of the Natal Museum*, vol. xii, 2, 1952, p. 246, I pointed out that four specimens from extreme north-eastern Zululand were rather different to Natal topotypes, and suggested that they were intermediate between *C.a.abingoni* and an unnamed race in southern Portuguese East Africa. In my report of 1953, I suggested that it might be necessary to name the north-eastern Zululand populations, but I now subscribe to the view that the recognition of two races in Natal and Zululand would be insupportable in the light of the known dimorphic variation recently determined in *C.a.abingoni*. The wings of the nominate race measure in ♂♀ 104–112 mm., and its range can be defined as most of Natal (apparently replaced in the extreme south-western coastal areas by *Campethera notata relicta* Clancey (*vide Bull.*

B.O.C., vol. 78, 2, 1958, pp. 31–35) and Zululand, north of which, in south-eastern Swaziland and extreme southern Sul do Save, it intergrades in a narrow zone of contact with the following subspecies.

Until my paper of 1953, the populations occurring in the eastern Transvaal, Mashonaland, eastern Southern Rhodesia, and southern Portuguese East Africa, were invariably placed along with those of the typical race. The populations named by me *C.a.vibrator* consist of distinctly larger-sized (wings of ♂♀ 110.5–122.5 mm.) and paler birds, the upper-parts with a heavy overlay of grey on a lighter green ground, and the under-parts distinctly whiter. The upper-parts are also more barred than spotted, and the tertials have transverse bars, vestigial in *C.a.abingoni*, which are complete and prominent. The magnificent material before me reveals that this race is a much more stable taxon than *C.a.abingoni*, and unlike that race is not dimorphic. Despite arguments to the contrary, *C.a.vibrator* is perfectly distinct from *C.a.abingoni* on both structural and colour grounds. While admitting that *C.a.vibrator* may be different to *C.a.abingoni*, White, *loc.cit.*, has laboured to show that it cannot be separated from *C.a.suahelica*, the *Type* of which he avers came from Dar es Salaam. Now, White does not divulge the nature of his material, but if it be that in the British Museum his findings on the races concerned can be dismissed on the grounds that he had insufficient specimens upon which to base a scientifically irrefutable opinion. There are no topotypical examples of *C.a.vibrator* in the British Museum, and just three topotypical *C.a.suahelica*, only two of which are adult! On the label of one of the skins of *C.a.suahelica*—a ♀ from Kilosa, Tanganyika Territory (B.M.Reg.No. 1927.6.4.3)—the late Rear-Admiral Hubert Lynes has written "Compared with type *suahelicus* ex Berlin Mus. 31.xii.32. A close match. H. Lynes." Using this specimen, in addition to another ♀ from Kilosa (mainly juvenal dress), and a ♀ from Lyamingo, Kilimanjaro, I find that *C.a.suahelica* does not resemble *C.a.vibrator* at all, but is, paradoxically, rather like the saturated austral *C.a.abingoni*, from which it differs in being larger (wings ♀♀ 112–115.5 mm.). Specimens in the British Museum from Mlanje, Nyambadwe (Blantyre district) and Zomba, southern Nyasaland, agree well with *C.a.suahelica*, the range of which can be extended southward to include northern Portuguese East Africa (except Zambezia) and most of Nyasaland. In the Lower Shiré district of southern Nyasaland it is replaced by *C.a.vibrator*, judging by specimens of the latter in the British and Durban Museums collected at Chiromo. *C.a.vibrator* also ranges well to the north of the Zambesi River into the eastern districts of Northern Rhodesia, as evidenced by specimens in the Durban Museum from Fort Jameson. A specimen from Dedza, Nyasaland, in the British Museum is *C.a.vibrator*, as are others from Portuguese territory collected by Jack Vincent at Tete; 30 m. N. of Tete; 15 m. S. of Furancungo; 50 m. S.E. of Milanje, etc. From this it will be appreciated that the ranges of *C.a.vibrator* and *C.a.suahelica* interdigitate in the country immediately to the north of the lower Zambesi.

While the pattern of geographical variation in the south-eastern littoral is simple and now sufficiently well understood as to permit the recognition of two nomenclaturally recognisable races from within our limits, that of the populations resident in the interior and arid west is still largely unresolved. On the basis of a more densely spotted or blackish throat and breast (compared with *C.a.abingoni)* these latter populations have been kept specifically or subspecifically separate for over the past hundred years, ever since Malherbe, in 1845, pointed out the difference on describing *Picus* (*Chrysoptilopicus) Smithii* from "South Africa." For long it was believed that this name correctly belonged to the blackish throated and breasted western and south-western populations, and arising from this mistaken impression Malherbe described *Chrysopicus brucei*, 1862: Bechuanaland, and Layard *Dendrobates striatus*, 1871: Kanye. As correctly shown by Roberts, *Annals of the Transvaal Museum*, vol. xviii, 3, 1936, p. 255, *C.a.smithii* is applicable to the populations with spotted throats and breasts occurring in the interior. Roberts restricted the type-locality of *C.a.smithii* to Marico, western Transvaal, placing *C.brucei* and *D.striatus* as synonyms, and described the populations of central South-West Africa as new under the name *C.a.anderssoni*, the *Type* from Windhoek. It is important to notice that in his description of *C.a.anderssoni*, Roberts demonstrates that not all central South-West African birds are to be distinguished from *C.a.smithii*, and arising from this anomalous state of affairs *C.a.anderssoni* has been reluctantly accepted by most workers (*cf.* Chapin, Birds of the Belgian Congo, part ii, 1939, p. 567, where the characters of *C.a.smithii* and *C.a.anderssoni* are reversed!). Some specialists have suggested that *C.a.anderssoni* and *C.a.annectens* are almost inseparable, and Vincent, *loc.cit.*, treated them as synonymous. I find that *C.a.anderssoni*, *C.a.smithii* and *C.a.annectens* are all distinct racial taxa, the ranges of which converge in the northern half of South-West Africa and southern Angola, the resulting miscegenal populations presenting a somewhat confused variational picture which is difficult to analyse when such apparently unstable populations are studied independently.

C.a.anderssoni is a race now known to be centred on the Orange River (specimens from the Great Aughrabies Falls, Upington, and at several points on the Orange near Prieska), Great Namaqualand and the northern Cape Province (specimens from Campbell, and Riverton, near Kimberley). This race is characterized by having the throat and breast mainly sooty black striated and spotted with white, and the rest of the under-parts more heavily streaked, the flanks somewhat barred, on a paler yellowish ground than *C.a.smithii*. It is also rather more greyish above with less greenish admixture, but in size scarcely differs (wings ♂♀ 116–128 as against 114–127 mm. in *C.a.smithii*). The northern limits of *C.a.anderssoni* are difficult to define in view of the confused state of the populations in Damaraland and the Central Bechuanaland Protectorate. Specimens agreeing with *C.a.anderssoni* have been examined from Windhoek (type-locality), Okahandja, Okanjande, Omaruru and Otjimbingwe, while others from the same general area (specimens from Windhoek, Okahandja, Swakop River and Ondongantji (Omaruru) are inseparable from topotypical *C.a.smithii*. A ♂ from the Huab River, Kaokoveld, taken on 26th June, 1937, in the Transvaal Museum, is a typical example of *C.a.smithii*, though identified by Roberts as *C.a.anderssoni*. I have seen undoubted specimens of *C.a.anderssoni* from Onguati and Outjo, Kaokoveld (see also Macdonald, *Contribution to the Ornithology of Western South Africa*, 1957, p. 91), Ngami Flats, northern Bechuanaland Protectorate, Ondonga, Ovamboland and Muhino, Huila, south-western Angola, and even one

♀ (30th January, 1957) from 18 m. S. of Nata, eastern Bechuanaland, is very like it. What appears to be taking place in northern South-West Africa and central Bechuanaland is a general elimination by genetic swamping of *anderssoni-type* birds with much melanin by invading peripheral elements of the wide-ranging *C.a.smithii* of south-central Africa, a race with reduced melanin and more lipochrome. The type-locality of *C.a.anderssoni* is an unfortunate choice, as it is now known to be in an area of considerable subspecific instability.

Specimens from Marico in the Transvaal Museum show that *C.a.smithii* is applicable to birds with the throat and breast spots greatly enlarged, rounded and massed into a gorget (compared with its eastern congener, *C.a.vibrator*), and with the ground colour of the under-parts Primrose Yellow (pl. xxx). Some birds without a well-marked gorget and rather more uniformly streaked below occur in the western and central Transvaal populations, thereby slightly adumbrating the characteristics of the eastern forms. On such a bird from south-eastern Bechuanaland the name *D.striatus* was introduced into nomenclature. It should be appreciated that the ranges of *C.a.anderssoni*, *C.a.smithii* and *C.a.vibrator* meet in the western half of the Transvaal. Birds agreeing with topotypical *C.a.smithii* have been examined from several localities in the western and northern Transvaal, northern and eastern Bechuanaland (Maun, Shorobe, Toteng, Kabulabula, Panda Matenga, Nata, Tati), western Southern Rhodesia (Bulawayo, Fort Tuli, Matopos, Gwaai, 40 m. N. of Tjolotjo, Wankie, Victoria Falls, etc.), Northern Rhodesia (Mwinilunga, Chambezi Valley, Chimpili Plateau, etc.), and Caprivi Strip (Kabuta), and in Portuguese territory on the central Zambesi (Zumbo). As already noted above, many specimens from central Damaraland are also inseparable from topotypical *C.a.smithii*. In their recent *Check List of the Birds of Northern Rhodesia*, 1957, p. 66, Benson and White placed most of the Northern Rhodesian populations as *C.a.annectens*, while Smithers, Irwin and Paterson, *Check List of the Birds of Southern Rhodesia*, 1957, p. 91, classified exactly similar Southern Rhodesian populations as *C.a.smithii*, which is correct. White, in his lambent writings on this species, has even suggested that the Zambesi River segregates *C.a.annectens* and *C.a.smithii*! The correct racial name for the bulk of the Northern Rhodesian populations is *C.a.smithii* (*C.a.vibrator* in the Luangwa Valley, and, perhaps, *C.a.suahelica* in the extreme east and north-east) and not *C.a.annectens*, which is applicable to a small-sized race of western and northern Angola. Specimens of *C.a.annectens* in the British Museum are distinctly smaller than *C.a.smithii* (wings of 8 ♂♀ 107.5–115 (111.5) mm.), and have the throat and breast more streaked than spotted (rather similar to intergrading *C.a.smithii* ≷ *C.a.vibrator* populations in the central Transvaal), and possess an abdominal cincture over which the spotting is reduced or vestigial. The ground colouration of the under-parts is also duller and less yellowish than in *C.a.smithii*.

Four nomenclaturally recognisable races of the Golden-tailed Woodpecker can be admitted in our formal taxonomic arrangement of the South African sub-continental populations, and the names, subspecific characters and ranges of these are detailed in synoptic order below. Both *C.a.annectens* and *C.a.suahelica* are valid extralimital forms, while four other named races occur beyond our limits.

(a) *Campethera abingoni abingoni* (Smith)

> *Chrysoptilus Abingoni* A. Smith, *Report of the Expedition for Exploring Central Africa from the Cape of Good Hope*, 1836, p.53: Port Natal, *i.e.*, Durban, Natal, South Africa.

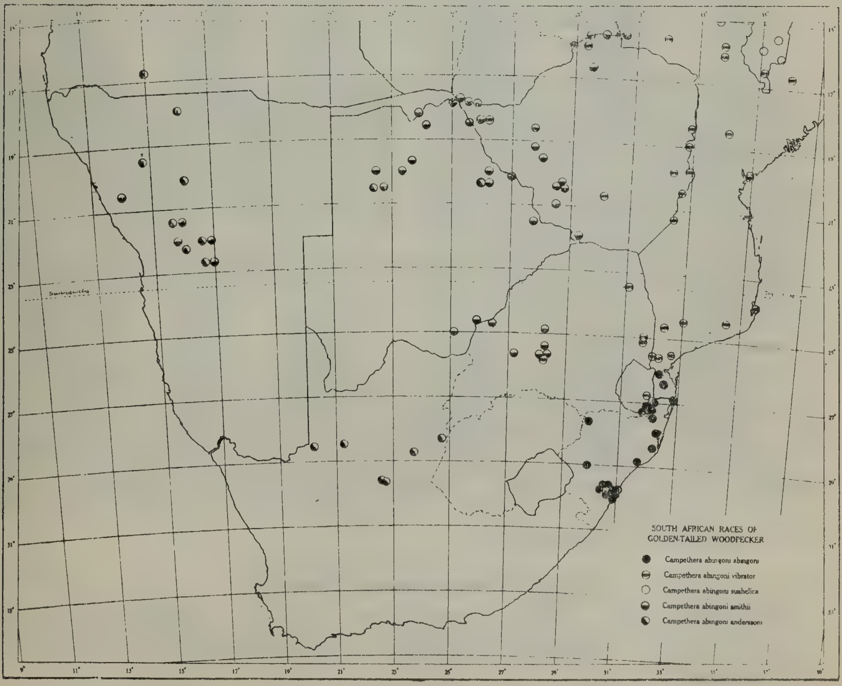
♂ ad. Forehead and crown leaden grey, feathers fringed with vermilion; hind crown lustrous vermilion, the feathers slightly elongate; mantle either Orange-Citrine or Warbler Green, spotted with yellowish white and olive-brown; rump similar but transversely barred and not spotted. Ground colouration of under-parts either Naples or Primrose Yellow; throat lightly spotted, and rest of ventral surface streaked with blackish brown, the streaks concentrated on the lower throat, breast, body sides and flanks. Wings olive-brown, the tertials with disrupted transverse bars of yellowish white. ♀ ad. Similar to the ♂, but with the forehead and crown olive-black spotted with greenish white.

Wings 18 ♂♂ 106–112 (109.2). 18 ♀♀ 104–112 (108.1), culmens from base 16 ♂♀ 26.5–30 (27.8) mm.

Type: Not traced.

Material examined: 40. *C.a.abingoni* ⋛ *C.a.vibrator:* 3.

Range: Throughout most of Natal (apparently replaced in the south-western littoral by *C.n.relicta*) and all Zululand. Intergrades in south-eastern Swaziland and extreme southern Sul do Save, southern Portuguese East Africa, with *C.a.vibrator*.


SOUTH AFRICAN RACES OF GOLDEN-TAILED WOODPECKER
● Campethera abingoni abingoni
⊖ Campethera abingoni vibrator
○ Campethera abingoni suahelica
◒ Campethera abingoni smithii
◐ Campethera abingoni anderssoni

(b) *Campethera abingoni vibrator* Clancey

Campethera abingoni vibrator Clancey, *Ostrich*, vol. xxiv, 3, 1953, p. 167: Farm Malamala, Newington, eastern Transvaal, South Africa.

Compared with *C.a.abingoni* paler and greener on the mantle (about Serpentine/Roman Green, pl. xvi) and with a variable overlay of greyish olive, which is absent in the nominate race; rump paler, being Serpentine Green; barring on upper-parts coaser and whiter. On under-parts lighter the throat and upper-breast whiter, and the rest of the ventral surface with ground colour between Marguerite/Primrose Yellow (pl. xxx), as against Naples or Primrose Yellow in *C.a.abingoni.* Wings paler, with the bars of the tertials well defined and whiter. Tail paler. A larger race than *C.a.abingoni.*

Wings 19 ♂♂ 111.5–121.5 (115.7), 15 ♀♀ 110.5–122.5 (115.8), culmens 21 ♂♀ 27–31.5 (28.9) mm.

Type: In the Durban Museum, South Africa.

Material examined: 54.

Range: From the Luangwa Valley of eastern Northern Rhodesia, and some districts of southern Nyasaland (Chiromo, Port Herald, Dedza etc.), and Zambezia, northern Portuguese East Africa, to Mashonaland, eastern Southern Rhodesia (in the north, west to Chirundu), the whole of southern Portuguese East Africa, north-eastern and eastern Transvaal and eastern Swaziland. Intergrades to the north of its range with *C.a.suahelica* and in the west with *C.a.smithii.*

(c) *Campethera abingoni smithii* (Malherbe)

Picus (*Chrysoptilopicus*) *Smithii* Malherbe, *Rev. Zool.*, 1845, p. 403: South Africa. Restricted type-locality: Marico, western Transvaal (*vide* Roberts, *Annals of the Transvaal Museum*, vol. xviii, 3, 1936, p. 255).

On upper-parts slightly more richly and olivaceous coloured than *C.a.vibrator*. Below less pallid, the ground colouration being Primrose Yellow, and with the centre of the throat and whole breast densely spotted with black, the spots concentrated and overlapped to form a well-defined gorget; rest of under-parts rather more heavily streaked and spotted than *C.a.vibrator*. Rather blacker round the eyes and on the supercilia. Averaging slightly larger in size.

Wings 18 ♂♂ 114–127 (119.5), 7 ♀♀ 116–125.5 (120.3), culmens 16 ♂♀ 28–32 (29.8) mm.

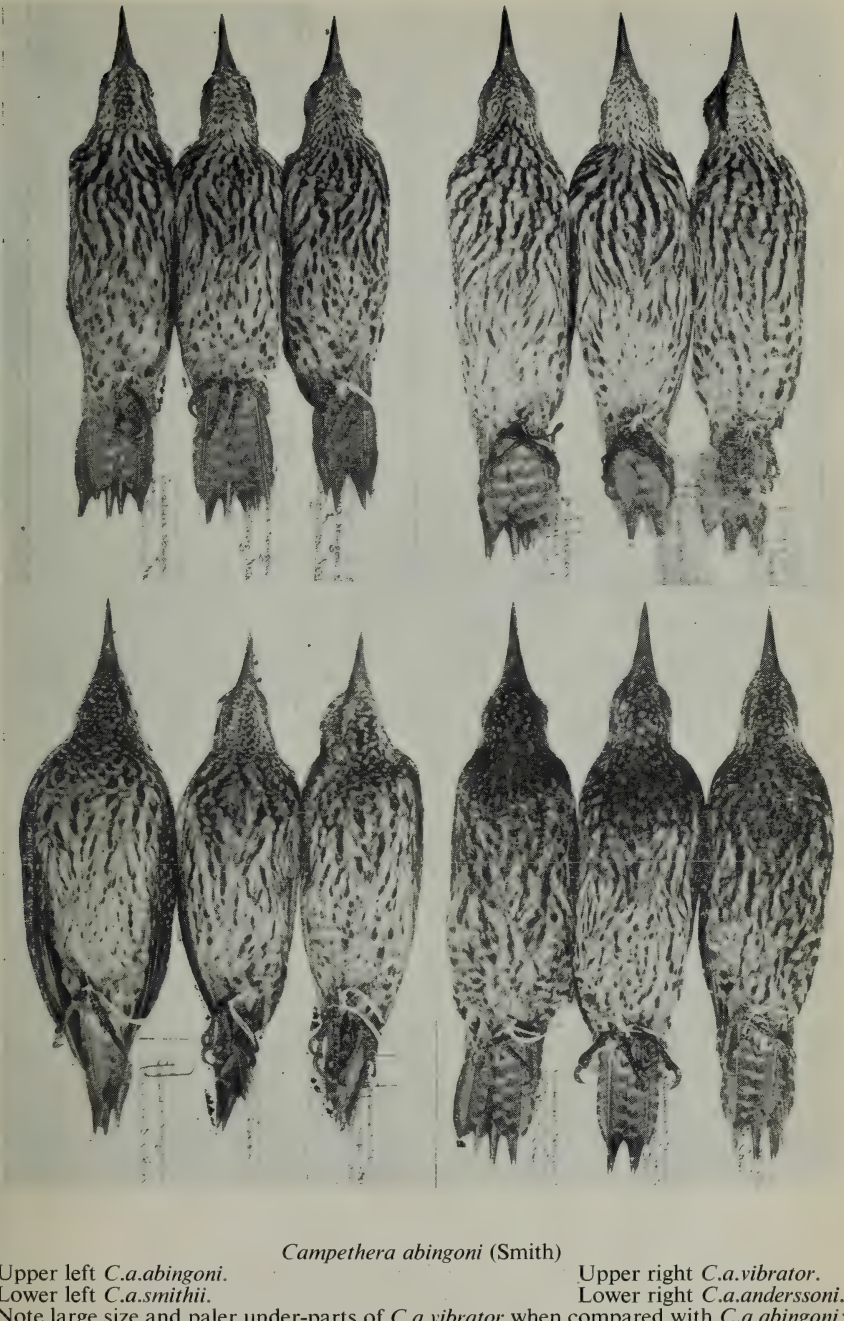
Type: Not traced.

Material examined: 60.

Range: Southern Belgian Congo in the Katanga, eastern Angola (Lunda, Moxico, Cubango), most of Northern Rhodesia (except Luangwa Valley and extreme eastern districts) including Barotseland, north-eastern South-West Africa and Caprivi Strip, eastern, central and northern Bechuanaland Protectorate, Matabeleland, Southern Rhodesia, and western and northern Transvaal. Intergrades to the south-west and south of its range with *C.a.anderssoni.*

(d) *Campethera abingoni anderssoni* (Roberts)

Chrysoptilopicus abingoni anderssoni Roberts, *Annals of Transvaal Museum*, vol. xviii, 3, 1936, p. 255: Windhoek, Damaraland, South-West Africa.



Campethera abingoni (Smith)
Upper left *C.a.abingoni*. Upper right *C.a.vibrator*.
Lower left *C.a.smithii*. Lower right *C.a.anderssoni*.
Note large size and paler under-parts of *C.a.vibrator* when compared with *C.a.abingoni;* also blackish throat and breast of *C.a.anderssoni* compared with *C.a.smithii*. All specimens in Durban Museum collection. (Photo: A. L. Bevis)

More greyish on mantle than *C.a.smithii.* Ground colouration of under-parts paler, being about Sea-foam Yellow (pl. xxxi), and with the whole throat and breast sooty black spotted and streaked with dull white; rest of under-parts more intensely striated, and flanks distinctly barred with blackish. Still blacker round the eyes and on the supercilia. Size about the same.

Note: Females often more streaked and less uniformly black on throat and breast than the males.

Wings 12 ♂♂ 116–128 (120.6), 8 ♀♀ 115–122.5 (119.0), culmens 15 ♂♀ 27.5–32.5 (30.2) mm.

Type: In the Transvaal Museum, Pretoria, South Africa.

Material examined: 21.

Range: North-western and northern Cape Province eastwards to the western Orange Free State and south-western Transvaal, southern and south-western Bechuanaland Protectorate, and in South-West Africa throughout Great Namaqualand and southern Damaraland. Apparently ranging northwards in the west to the Kaokoveld and some south-western districts of Angola (Huila). It is not known if this latter portion of the distribution is continuous or entirely disrupted by intrusive populations of *C.a.smithii.*

Plumage Variants in Drake Gadwall

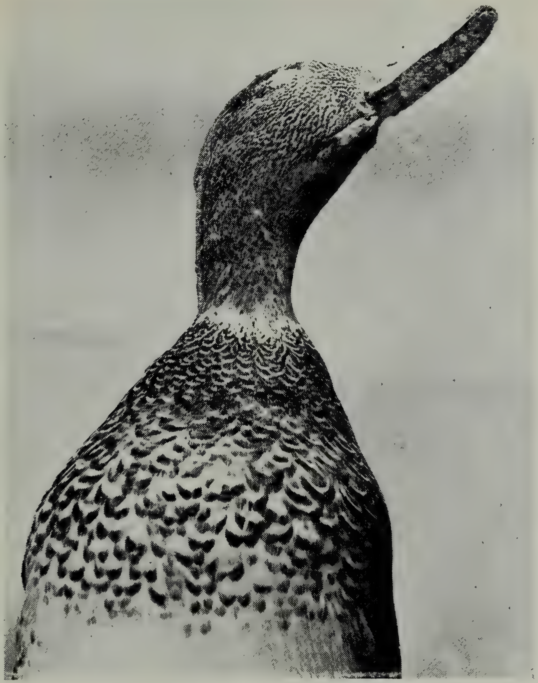
by DR. JAMES M. HARRISON AND DR. JEFFERY G. HARRISON

Received 15th February, 1959

A small series of twelve drake Gadwall, *Anas strepera* Linnaeus, in our collections shows two distinct types of plumage variant, which we believe are of evolutionary significance. The first variant, which has already been briefly mentioned[1], consists of the presence of a partial or complete white neck ring. Three specimens show this. The most marked example was obtained at Rainham Hall, Kent in November 1933 and is illustrated in this paper. The white neck ring is well defined and extends around the neck for as far as does the ring of the drake Mallard, *Anas platyrhynchos platyrhynchos* Linnaeus, and it is situated in the same place. The second example was collected on Lough Erne, Co. Fermanagh, Northern Ireland on December 2nd, 1931 and was in the collection of Mr. C. W. Mackworth-Praed, which he very kindly presented to us. This bird has a partial white neck ring extending for about three quarters of an inch in the mid-line anteriorly. The third, which has a ring intermediate in extent between these two, was shot by Mr. Colin McLean on Hickling Broad, Norfolk on January 30th, 1948.

There is no doubt in our minds that these variants are analagous to the white neck-spot variant which we have described in the European Green-winged Teal, *Anas crecca crecca* Linnaeus, and the Yellow-billed Teal, *Anas flavirostris flavirostris* Vieillot[2,3], and provide further evidence of the affinity of the Gadwall to those two species and to the Mallard.

The second type of variant, represented by two other specimens in our series, consists of dark terminal spotting on the normally white underparts. This is most marked in a first winter drake shot at Otford, Kent on December 20th, 1958, and is present in a less pronounced form in a specimen shot on September 9th, 1939 at Pett, Sussex. This again is exactly analagous to the variant drake Teal previously described[4] with completely spotted underparts.



White Neck Ring in a drake Gadwall.

References:—

[1]. James M. Harrison. "*Further Instances of Aberrations of Pattern in the Anatidae*" Bull. B.O.C., Vol. 74, pp. 52–3. 1954.

[2]. James M. Harrison & Jeffery G. Harrison. "*The White Neck-Spot Variant in the European Green-winged Teal and the Yellow-billed Teal*" Bull. B.O.C., Vol. 78, pp. 104–5, 1958.

[3]. James M. Harrison & Jeffery G. Harrison. "*Further Remarks on the White Neck-Spot Variant in the European Green-winged Teal*" Bull. B.O.C., Vol. 79, pp. 25–27, 1959.

[4]. James M. Harrison. "*Exhibition of two Varieties of the Teal*" Bull. B.O.C., Vol. LXVI, p.24, 1946.

The Status of the Great Black Woodpecker in the British Isles

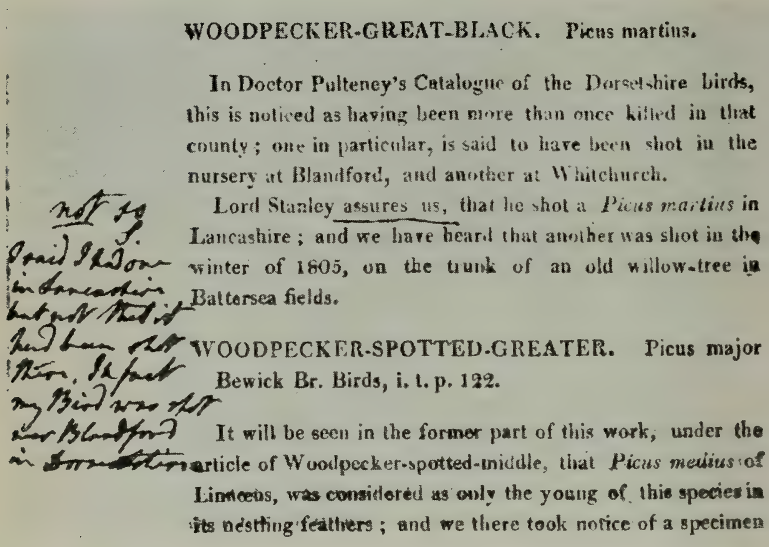
by MR. R. S. R. FITTER

Received 12th December, 1958

PART ONE

During the first half of the 19th century the Great Black Woodpecker, *Dryocopus* (*Picus*) *martius* (Linnaeus), was an accepted member of the British avifauna, with the status of a rare vagrant. From Latham (1787) onwards no historian of our birds questioned its right to be considered British. Not until 1871 were any serious doubts expressed, but in that year J. H. Gurney's summary in the fifth volume of Dresser's *Birds of Europe* completely discredited its British status in the eyes not only of almost all contemporary ornithologists (J. E. Harting was a notable exception), but of most later ones as well.

Newton, in his revised edition of Yarrell, pronounced that Gurney had "completely disposed of the claims set up in nearly every instance", and



WOODPECKER-GREAT-BLACK. Picus martius.

In Doctor Pulteney's Catalogue of the Dorsetshire birds, this is noticed as having been more than once killed in that county; one in particular, is said to have been shot in the nursery at Blandford, and another at Whitchurch.

Lord Stanley assures us, that he shot a *Picus martius* in Lancashire; and we have heard that another was shot in the winter of 1805, on the trunk of an old willow-tree in Battersea fields.

not so
I.
said I had one
in Lancashire
but not that it
had been shot
there. In fact
my Bird was shot
near Blandford
in Dorsetshire

WOODPECKER-SPOTTED-GREATER. Picus major
Bewick Br. Birds, i. t. p. 122.

It will be seen in the former part of this work, under the article of Woodpecker-spotted-middle, that *Picus medius* of Linnæus, was considered as only the young of this species in its nestling feathers; and we there took notice of a specimen

The entry in Lord Stanley's own handwriting in his copy of Montagu's *Ornithological Dictionary* which shows that the Great Black Woodpecker in his collection, supposed to have been shot in Lancashire, had in fact come from Blandford in Dorset and was therefore presumably the one mentioned by Pulteney in 1799.

in his own *Dictionary of Birds* abandoned even this qualifying phrase and said that "the persistency with which many writers on British birds have for years included this species among them is a marvellous instance of the durability of error, for not a case of its asserted occurrence in this country is on record that will bear investigation, and the origin of the mistake has been more than once shewn". Nobody would guess from this sweeping judgment that Newton himself, at the age of 18, had published a record of the Great Black Woodpecker in Essex, which he seems never to have specifically withdrawn.

Yet all the time Gurney's great work of demolition of unsound records contained an unwitting error. For many years one of the few remaining old records of the Great Black Woodpecker which retained the confidence of ornithologists was Lord Stanley's of one said to have been shot in Lancashire. Indeed the bird was virtually retained on the British List only because it was not thought possible to doubt the word of so eminent a nobleman. Then it was discovered that in Stanley's copy of Latham he had erased the relevant passage and written in the margin "a mistaken idea". From this E. Newman (*Zool.* 23: 9626; 1865) jumped to the conclusion that an error in identification had been made, and that the bird in question must have been a Great Spotted Woodpecker (*Dendrocopos major*). This erroneous guess sealed the doom of the Great Black Woodpecker as a British bird. For, as demonstrated below in Appendix I (Lancashire 1), Newman guessed the wrong kind of mistake. What Stanley meant was that the bird had been shot in Dorset, not Lancashire. His bird was in fact the Blandford specimen mentioned by Pulteney (1799). This discovery alone should serve to restore the Great Black Woodpecker to the British List.

Under the influence of Newton and without adequate consideration of subsequently accruing records, the Great Black Woodpecker was rejected by both B.O.U. Lists, in 1883 and 1915, and by Witherby and his collaborators in the successive *Handlist* (1912), *Practical Handbook* (1919–24) and *Handbook of British Birds* (1938–41). Yet by 1938 at least 30 records (not counting the East Anglian ones) had been published since Gurney's summary, some of the most convincing of them in Witherby's own journal *British Birds*. Not until the appearance of Volume IV of David Bannerman's *The Birds of the British Isles* (1955) did an ornithologist of the front rank once more admit the Great Black Woodpecker to full treatment in a general work on British birds, and even Bannerman suspended judgment on the bird's claim to be British.

The aim of the present paper is to suggest that the treatment of the Great Black Woodpecker by ornithologists since Gurney and Newton is another marvellous instance of the durability of error, the error not of credulity but of unco incredulity. This is by no means to say that Gurney and Newton were wrong, in the light of the then existing knowledge, nor to deny that some erroneous claims have been made, but the fact that error and even fraud have occurred in the past is no reason either for ignoring new facts or for not taking a fresh look at old ones.

No bird not on the official British List has so often been recorded wild in Britain as the Great Black Woodpecker. I have collected no fewer than 82 records, a few here published for the first time, of which 10 are rather vague general statements, 49 are specific sight records and at least 26 have at some time been backed by specimens, in one case a clutch of eggs. (These figures do not add up because a few records fall into two categories). Actual error or fraud has been proved in only four cases, though in a number of others the description of the bird is unsatisfactory in a material respect, the provenance of the specimen is suspect, or the birds are known to have been in captivity. There remain, however, 9 general statements, 17 specimen records and 37 sight records, which there is no specific reason for rejecting, even though some of them still contain elements of doubt. Out of these 54 records seven have been selected as being unassailable in their claims, viz. three specimen records (listed as Dorset 1, Wiltshire 1 and Yorkshire 8 in Appendix I) and four sight records (Hertfordshire 2, Brecon 2, Notts 2 and Cheshire 1). It is on these seven that the burden of the case for reconsidering the status of the Black Woodpecker as a British bird rests.

Before turning to a detailed analysis of the surviving uninvalidated records, we may examine the general arguments that have been advanced against the possibility of the Great Black Woodpecker being a British bird. First among these is the fact that, in common with most other Woodpeckers, it is normally sedentary. Some ornithologists have believed so strongly that Great Black Woodpeckers could not reach our shores unaided that they have committed such absurdities as suggesting (before they were known to be escapes) that the observers who saw the Great Black Woodpeckers in the Brandon district must actually have seen Nutcrackers (*Nucifraga*). However, even sedentary birds tend to wander slightly at the end of the breeding season, and the Great Black Woodpecker is in fact recorded as a scarce winter visitor to Denmark, where it does not breed (Bannerman 1955). Furthermore, since 1913 the Great Black Woodpecker has started to breed in the Netherlands and is now widespread in the woods of the eastern and southern provinces (van Ijzendoorn 1950). These must have come from somewhere, and if birds can wander into Holland and Denmark there is no reason why they should not occasionally be wind-drifted across the North Sea. In fact, however, the only British Great Black Woodpecker record suggesting a recent immigrant was Cornwall 1, where the bird might have been coming from the Pyrenees.

The next line of defence is that the birds recorded in Britain may have been wrongly identified. In one instance (Norfolk 1) the Great Spotted Woodpecker (*Dendrocopos major*) is known to have been misrecorded as Great Black, and Devon 3 & 4 and Scotland 2 may be due to the same error. Were it not for the proved example, one would have said that it was impossible to mistake anything else for so distinctive a bird as the Great Black Woodpecker, given a clear view at close range. A bird the size of a rook, coal black all over except for a red patch on the head, and having the conspicuously woodpecker-like habits of climbing trees and flying with marked undulations, could hardly be misidentified. Certainly nobody who had ever seen a Great Black Woodpecker in the field, or had heard its distinctive, far-carrying, loud, clear, fluty string of double call-notes, could fail to recognise it on meeting it again in England.

However, the crux of the sight-record question is that in the 19th century sight records were just not believed in, largely because very few of the leading ornithologists of the day had the skill or field experience to identify the rarer migrants or vagrants that might be met with. No bird was admitted to the British List until a dead British-taken specimen was produced. It was the Great Black Woodpecker's misfortune that despite the numerous specimens shot or alleged to have been shot in these islands, no indubitably British-taken skin had come down to posterity, as represented by Gurney and Newton, while none of the older ornithologists had at that time left any conclusive published evidence that he had himself seen a British-taken specimen. Sight records were quite unacceptable until one specimen had been authenticated, after which they might be grudgingly admitted in square brackets. This presumably explains Newton's curious later attitude to the Great Black Woodpecker sight record he himself reported in 1847 (Essex 1). Nowadays, such is the ill-repute of many specimen records of the last hundred years, we have more confidence in a good field description by an experienced bird-watcher than in an old specimen in a museum. Unfortunately ornithologists of the last century just did not take field descriptions. It was the blind spot of a distinguished generation.

In 1871 Gurney was faced with a situation in which none of the specimens available could be authenticated as British-taken, the few old records by reliable ornithologists were distinctly vague, none of the numerous sight records had adequate field descriptions attached, and most had none. It would have been reasonable to suspend judgment at this point, but in fact the following generation of ornithologists, overawed by Gurney's massive research and Newton's emphatic pronouncements, seem to have made up their minds that the Great Black Woodpecker not only was not but could not be a British bird. Hence the curious neglect of every subsequent record, the scant attention paid to Clement Ley's convincing observations, the first with even partial field descriptions, and the open conspiracy that any post-1895 records should be attributed to the two ailing birds released in that year by Lord Lilford.

Another possibility, often suggested, is of confusion with melanic Green Woodpeckers (*Picus viridis*). Mr. Bryan L. Sage, who is making a special study of heterochrosis in British birds, kindly informs me that he has never heard of a case of complete melanism in the Green Woodpecker, though he knows of one instance of partial melanism, an adult male with pale brown secondaries and wing coverts on the left wing, shot at Norwich in January 1886 (*Zoologist*, 1887, p. 416). (It is perhaps worth noting that there is no valid record of the Great Black Woodpecker for either Norfolk or Suffolk.) In the present study, only three records have come to light which sound at all like melanic Green Woodpeckers, viz. Surrey 4, Hertfordshire 1 and Berkshire 4. In each case the birds are clearly not normal Great Black Woodpeckers. Size alone, of course, should normally distinguish a Great Black from a melanic Green Woodpecker. It is clear, at any rate, that melanic Green Woodpeckers, if they exist, are much too scarce to account for more than a very small fraction of the 54 uninvalidated British records of the Great Black Woodpecker, many of which indeed are accompanied by descriptions and specimens which could not possibly be melanic Green Woodpeckers.

During the 19th and early 20th centuries many collectors with more money than sense were prepared to offer high prices for British-taken rarities, and there is no doubt that at one time a number of Great Black Woodpeckers were in fact brought over with parcels of game from Scandinavia and passed off as British-taken. The two proved instances of this kind of fraud are Hampshire 2 and Berkshire 2, and the rumour included as Norfolk 2 probably comes into the same category. There is good reason to suppose that Yorkshire 6 & 7, both emanating from the Hull district in the same month (November) as Berkshire 2 and Norfolk 2 are also due to fraud. These five records all occurred between 1868 and 1879, from which period also dates Shropshire 1, a specimen whose provenance is unknown. The only other instance in which doubt has been successfully cast on the origin of a specimen is Devon 3, said to have been taken about 1830, but perhaps not in Devon; whether the doubt is due to fraud or honest muddle is not stated. There is no other evidence of commercial frauds as early as 1830.

Finally, it has often been suggested that any genuine Great Black Woodpeckers seen in Britain must have either escaped or been deliberately released from captivity. Woodpeckers of any kind, however, are rarely kept in captivity—they are not even mentioned by Goodwin (1956) —and according to Lord Lilford the bird he acquired for his collection in 1891 was "the first Great Black Woodpecker that, so far as I know, has ever been seen in this country" (Lilford 1900). The only recorded escapes or introductions of Great Black Woodpeckers in the British Isles all took place in 1895 and 1897. Lilford released his two birds in 1895 because they were ailing in health, so it may be hazarded that they did not survive long. Then in 1897 seven or eight young birds were brought over from Sweden, presumably in late June or July, and kept for a time in an aviary near Brandon, Suffolk, before being released. Several were seen in various parts of the district during the next six years, but none more than 14 miles from Brandon, except for the birds reported in 1903 from Sheringham, 40 miles to the N.E. Finally, one bird escaped from the London Zoo on 9th October, 1897. Since the only positive evidence we have about the movements of introduced Great Black Woodpeckers shows that they did not move very far, it is sheer speculation to suppose that birds seen more than a hundred miles away in the years following 1897 must have come from Brandon. It is even wilder speculation to suppose that Great Black Woodpeckers seen in Britain at any other period must have come from some unrecorded source of introduction.

To facilitate analysis of the 82 records of the Great Black Woodpecker in Britain—there are none for Ireland—I have devised a system of four categories of reliability for the specimen records and eight categories for the sight records and general statements. The records themselves are listed in Appendix I, together with the evidence on which they are based.

Specimen Records

Category 1: Satisfactory records, where there is no doubt as to the identity or provenance of the specimen. Four specimens, fall into this category: Dorset 1, which Gurney did not know had passed into Lord Stanley's collection, and three, viz. Wiltshire 1, Middlesex 1 and Yorkshire 8, which were not known to Gurney. Wiltshire 1 is as well authenticated as any 19th-century record can now well be. Middlesex 1 is vouched for by Fothergill (1807) at a time when there is no reason to suspect importation frauds, but as it is such a very old record and Fothergill does not tell us how it came into his possession after being taken at Chelsea, it is not included in the seven records on which the case for the Great Black Woodpecker mainly rests. Saunders suggested that the 1897 Yorkshire specimen was one of the two sickly birds released in Northamptonshire two years previously, but this seems extremely unlikely. The Great Black Woodpeckers released 150 miles away in Suffolk in 1897 are ruled out because they were birds of the year, and the Yorkshire bird must have been plainly an adult, or Saunders could hardly have suggested it might have been a bird released two years before. (Young birds differ in having a less strong bill, the black not so pure and the red on the crown of the male duller and not so largely developed.) In the Yorkshire bird, therefore, we have the best possible evidence, a specimen shot under unimpeachable circumstances and identified by the foremost ornithologist of the day.

Category 2: Record not now provable because specimen lacking. This is the largest category of specimens, where it is a question of whether or not we believe the older ornithologists who recorded them. It contains 15 records localised to a county, viz. Somerset 1, Dorset 2, Isle of Wight 1, Hampshire 1, 2 & 4, Surrey 1 & 2, Middlesex 2, Lincolnshire 1, Notts 1, Yorkshire 3 & 5 and Scotland 2; and two unlocalised records, Great Britain 1 & 2, which could in fact refer to some of the localised ones. It is very hard to say today whether one can trust the judgment of Montagu and Howarth over Surrey 1 and of Pulteney over Dorset 2, or the certificate of the anonymous person who obtained Macgillivray's two specimens (Notts 1).

Category 3: Specimens of doubtful provenance, viz. Devon 3, Norfolk 2, Shropshire 1 and Yorkshire 6 & 7.

Category 4: Proven errors, viz. Hampshire 3, Berkshire 2, Norfolk 1 and Lancashire 1.

Sight Records.

Category 1: Satisfactory field description. Four records, none of them known to Gurney, fall within this category, viz. Hertfordshire 2, Brecon 2, Notts 2 and Cheshire 1. On these four, one (Brecon) by a very eminent field ornithologist, the late J. Walpole-Bond, together with the two specimen records mentioned above (Wiltshire 1, Yorkshire 8), the main case for the British status of the Great Black Woodpecker rests. All the other records listed in Categories 2–5 below and in Category 2 of specimen records can be treated as supporting data for the main seven. Most of them no doubt will be generally acceptable when the main records are validated.

Category 2: Description unsatisfactory only in a minor detail, which might well have been due to observational error. Three records, viz. Cornwall 1 (bill curved), Surrey 3 (red on head not seen) and Brecon 1 (tail forked).

Category 3: Description inadequate or lacking, but observer experienced. Eight records, viz. Devon 5, Hampshire 6, Middlesex 3, Herefordshire 1 & 4 & 5 & 6, Yorkshire 1. Five of these are due to the Rev. Clement Ley, who was familiar with the Great Black Woodpecker abroad and more than once saw it at close range or heard its unmistakable call-note in Herefordshire and Devon.

Category 4: Description satisfactory apart from size. Three records, viz. Kent 1, Berkshire 3, Derbyshire 1. These are not included in Cat. 2 because size, though easy to misjudge, is so important a factor in identifying the Great Black Woodpecker, which is rook-size, not jackdaw-size as these three records suggest. The Green Woodpecker, however, *is* the size of a Jackdaw, so that the unrecorded melanic Green Woodpecker must be considered a possibility here.

Category 5: Description inadequate or lacking and record not now provable. This is the largest category of sight records, as the corresponding Cat. 2 was of specimen records. It contains 18 occurrences, viz. Somerset 2 & 3 & 4, Hampshire 1 & 2 & 5 & 7, Essex 1, Berkshire 1, Bucks 1, Gloucestershire 1, Herefordshire 2 & 3 & 8, Warwickshire 1, Rutland 1, Flintshire 1 and Yorkshire 2 & 9. Many of these records would have been accepted automatically if the Great Black Woodpecker had been an established member of the British avifauna ever since Latham's day, for there is no positive reason for doubting the identification of any of them.

Category 6: Description unsatisfactory in a material respect. Five records, viz. Surrey 2 & 4, Hertfordshire 1, Berkshire 4, Herefordshire 7. The middle three of these are the most likely melanic Green Woodpecker suspects.

Category 7: Obvious or proven error: none.

Category 8: Known and suspected escapes. Three known escapes, viz. Middlesex 4, Suffolk 1 and Northants 1. Suffolk 2–5 almost certainly and Norfolk 3 most probably stemmed from the Suffolk 1 introduction.

General Statements.

Category 5: Description lacking and statement not now provable. Nine statements, viz. Devon 1 & 3 & 4, Dorset 3 & 4, Sussex 1, Northants 1, Worcestershire 1 & 2. Little reliance can be placed on any of these mostly rather vague statements, some of which may in fact be due to confusion with the Great Spotted Woodpecker.

Category 7: Obvious or proven error. Scotland 1 is an ancient semantic error.

Breeding Records.

A special word should perhaps be said about the two alleged breeding records of the Great Black Woodpecker in England. Surrey 2 is frankly incredible, owing to the extraordinary statement that the nest was in a hole in a wall, which was plastered up by the birds. This is not a habit of the Great Black nor of any of our three native Woodpeckers, while the Wryneck, which might nest in a wall, also does not plaster. Imagination boggles at the idea of anybody mistaking even a melanic Nuthatch for a Great Black Woodpecker! Hampshire 2 produced a clutch of eggs, but the experts who saw them could not agree on their identification, while the man who took them was a dealer and so is suspect*. It is possible that he found an abnormal Green Woodpecker clutch and tried to cash in by inventing a Great Black Woodpecker story, but there are no solid grounds for attempting to blacken his posthumous reputation in this way.

Geographical Distribution.

When the uninvalidated records are mapped, a number of curious points emerge. Table I shows their distribution by Watsonian provinces.

TABLE I. BLACK WOODPECKER RECORDS BY WATSONIAN PROVINCES

Watsonian Province	*Total*	*Specimen Records*	*Sight Records*	*General Statements*
Peninsula	9	1 Cat. 2	1 Cat. 2 1 Cat. 3 3 Cat. 5	3 Cat. 5
Channel	14	1 Cat. 1 6 Cat. 2	2 Cat. 3 3 Cat. 5	3 Cat. 5
Thames	11	1 Cat. 1 3 Cat. 2	1 Cat. 1 1 Cat. 2 1 Cat. 3 2 Cat. 4 2 Cat. 5	

---

* He also claimed Little Owl (*Athene noctua*) breeding in the New Forest.

Anglia	1			1 Cat. 5
Severn	12	1 Cat. 3	4 Cat. 3 5 Cat. 5	2 Cat. 5
S. Wales	2		1 Cat. 1 1 Cat. 2	
N. Wales	1		1 Cat. 5	
Trent	5	2 Cat. 2	1 Cat. 1 1 Cat. 4 1 Cat. 5	
Mersey	1		1 Cat. 1	
Humber	7	1 Cat. 1 3 Cat. 2	1 Cat. 3 2 Cat. 5	
Tyne	0			
Lakes	0			
Scotland	1	1 Cat. 2		

The most noticeable thing is that, except for a single record for Shetland, there are no valid Great Black Woodpecker records north of Yorkshire, and only three (Cheshire 1, Flintshire 1, Shropshire1) in the whole of north-west England and North and West Wales, down to Pembroke, Carmarthen, Radnor, Montgomery, Salop and Stafford. The east coast of England, where one would expect to find birds drifted across the North Sea, is, except for Yorkshire, singularly devoid of Great Black Woodpecker records. Indeed in the coastal counties from the Humber to Selsey Bill there are only four records (Lincolnshire 1, Essex 1, Kent 1 and Sussex 1), two of which are very vague, and none at all in Norfolk or Suffolk.

The pattern of Great Black Woodpecker records, indeed, does not suggest even irregular migration, but the presence in certain favoured areas of long-lived birds that have penetrated often well inland, after being drifted, either across the North Sea from Denmark to Yorkshire or across the Channel from the Pyrenees to the south coast of England. It is in fact the kind of pattern that might be expected in a normally sedentary species, whose occasional wanderings may be presumed to be in search of new territory. There are three of these favoured areas, the Home Counties, the New Forest and the southern Welsh Border country. The three Somerset records in the ten years 1935–44 are also interesting.

(*to be continued*)

Variations of plumage colourations in the Pochard *Aythya ferina* (Linnaeus) and the Tufted Duck *Aythya fuligula* (Linnaeus)

by MR. E. H. GILLHAM

Received 17th January, 1959

In a previous issue of this Bulletin (*antea* 77:140) Mr. Bryan L. Sage gives three examples of partial albinism in the Pochard. To these I can add a further three, also relating to adult females, together with records of other plumage variations.

From the beginning of August, 1953, to the time of writing, I have closely scrutinised the Tufted and Pochard populations in St. James's Park, London, with great regularity between late April and early October, and irregularly in winter. All birds described below were seen within six yards, and most of them within eight feet.

POCHARD

Melanism, with some isabelline colouring

One record of a female at the beginning of 1955. This bird very closely resembled a female Tufted Duck with which it was seen alongside. It was, however, a little warmer brown in colour, and the tips of the primaries were isabelline. The bird did not flap its wings so the extent of the buff on the primaries may have been greater than was actually visible.

Isabelline colouring

One record of an adult male in May, 1958. Tips of primaries—though open wing not seen—and tail a pale buff colour.

Partial albinism

Three records of adult females. The first, in January, 1958, had a small amount of white flecking on the nape. The second, in March, 1958, was pure white on the chin, throat, and front of neck finishing abruptly at upper breast. There were also a few white feathers on the hind-neck. The third, in July, 1958, had a white front to the lower neck, a few pure white feathers at the base of bill, on the crown, and behind and around the eye.

TUFTED DUCK

Isabelline colouring

At least six records relating to different adult males in the breeding seasons of 1956, 57 and 58. The following points were noted in six birds:—

1956 (1) a lot of pale buff in both wings including most of the primaries.
(2) a little pale buff in both wings—several primaries; on the back; and probably all of the tail.
(3) tips of the primaries only were a pale buff.
1957 (4) pale buff speckles over most of back and mantle.
1958 (5) a little pale buff in wings—mainly on wing coverts—and all of tail.
(6) whole of tail pale buff.

Partial albinism

Three records two of them relating to males. The first, in the winter of 1955/56 had fine white speckles over part of back and mantle. The second, a first winter bird in October, 1957, had a prominent white bar across the primaries of one wing about two-three inches from the wing tip. Also, a shorter white bar crossed one or two primaries about half-an-inch from the wider bar closer to the shoulder. The opposite wing was normal. The third was a juvenile with two prominent white bars on the coverts of one wing and some irregular wavy white barring on the opposite flank.

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 3/– each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

19th May, 15th September, 20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

Bird Room

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

BRITISH MUSEUM NATURAL HISTORY

PURCHASED

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 6

September
1959

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PURCHASED 2 SEP 1959

Volume 79
Number 6
Published: 1st September, 1959

The five hundred and seventy-third meeting of the Club was held jointly with the B.O.U. at the Rembrandt Hotel, S.W.7., on Monday, 18th May, 1959, following a dinner at 6.30 p.m.

Chairman: DR. W. H. THORPE

Is *Psittacula intermedia* (Rothschild) a Valid Species?

by MR. K. Z. HUSAIN

Received, 8th February, 1959

Psittacula intermedia (Rothschild), (since it has no local or English name, we may perhaps refer to it as Rothschild's parakeet), was first described by Rothschild in 1895, from a single skin sent to him from Bombay (India), and he thought it "most likely came from the Western Provinces". He described it as intermediate between *P. cyanocephala* (Linnaeus), the Western Blossom-headed parakeet, and *P. himalayana* (Lesson) (formerly *schisticeps*), the Himalayan Slaty-headed parakeet, in size and coloration. Hartert (1924), who studied six skins (all males) sent to him by a dealer in skins in London, fully agreed with Rothschild, and thought that the skins came from some part of the Himalayas. These are the only skins of this bird known to the world at present. No other information is available. Strangely enough, Baker (1927) makes no reference to it. Peters (1937) mentions it as a species in his check-list, but writes, "Distribution unknown, status doubtful." Recently Biswas (1953) and Ripley (1953) simply list it as a species.

Thus the status of this bird is still a mystery. Dr. Amadon, at Dr. Cain's request, has very kindly sent us one of the five skins in the Tring Museum collections, for examination. This bird, just as Rothschild described it, is perfectly intermediate between *P. cyanocephala* and *P. himalayana;* the former is distributed in the Western Himalayas from west Punjab to Bhutan Duars, Western Bengal and all over the forested and well-wooded country of peninsular India and Ceylon, the latter is restricted to the Himalayas.

The following table shows a list of the important characters as distributed in the three forms.

	P. cyanocephala	*P. himalayana*	'*P. intermedia*'
Bill	Rather slender; upper mandible yellowish, lower mandible black.	Rather heavy; upper mandible red with yellowish tip, lower mandible yellowish.	Like that of *himalayana*, but upper mandible less red.
Head	Bright red with generous blue wash.	Dark slaty-grey.	Forehead, lores and orbital regions purple-red, and the rest of the head and cheek slaty-purple.
Neck	Wide area verdigris-green.	Same as in *cyanocephala.*	Same as in *himalayana.*
Back	Yellowish-green.	Dark grass-green.	Yellowish-green.
Rump and upper tail-coverts	Green with generous blue wash.	Grass-green.	Green with slight bluish-tinge.
	P. cyanocephala	*P. himalayana*	'*P. intermedia*'
Central tail-feathers	About 209 mm., breadth about 7mm. near the tips. Bluish-green at the base, rest blue with white tips.	About 233 mm., breadth about 11 mm. near the tips. Green at the base, blue about one-third, and the rest bright yellow.	About 220 mm., breadth about 9mm. near the tips. Green at the base, rest blue with yellowish-white tips.
Other tail-feathers	Outer webs bluish-green, inner webs yellowish-green, tips yellowish-white.	Outer webs green, inner webs and tips bright yellow.	Outer webs bluish-green, inner webs greenish-yellow and tips bright yellow.
Under parts	Yellowish-green.	Green.	Yellowish-green.

Thus the specimen before us (see fig. 1) is clearly an intermediate between *P. cyanocephala* and *P. himalayana*, and one cannot help thinking that it is a hybrid between the two species just mentioned. Hartert writes, "If it were a hybrid, so many specimens would not very likely have come at the same time, and one would expect them to vary, but they are all alike." It is true that the hybrids normally show variation in characters, but it is not necessary that first-generation hybrids always would or should do so.

If, as I have suggested, '*intermedia*' is a hybrid between *cyanocephala* and *himalayana*, then Hartert is right when he says that it has come from some parts of the Himalayas, because *himalayana* is restricted to the Himalayas.

Two more species, closely related to *cyanocephala* and *himalayana* respectively, occur in the Eastern Himalayas, i.e. from about Bhutan Duars east through Assam to Burmese countries. These are *P. roseata* Biswas, the Eastern Blossom-headed parakeet, formerly a subspecies of *P. cyanocephala*, but described by Biswas (1951) as a distinct species; and *P. finschii* (Hume), the Burmese Slaty-headed parakeet, which is until now a subspecies of *P. himalayana* and which I think (1959) may prove to be a distinct species. One may think that '*intermedia*' is a hybrid between these two forms. But it seems very unlikely, because careful examination shows that the purple-red colour of the forehead, lores and orbital regions, and wide area of verdigris-green colour of the neck in '*intermedia*' could not

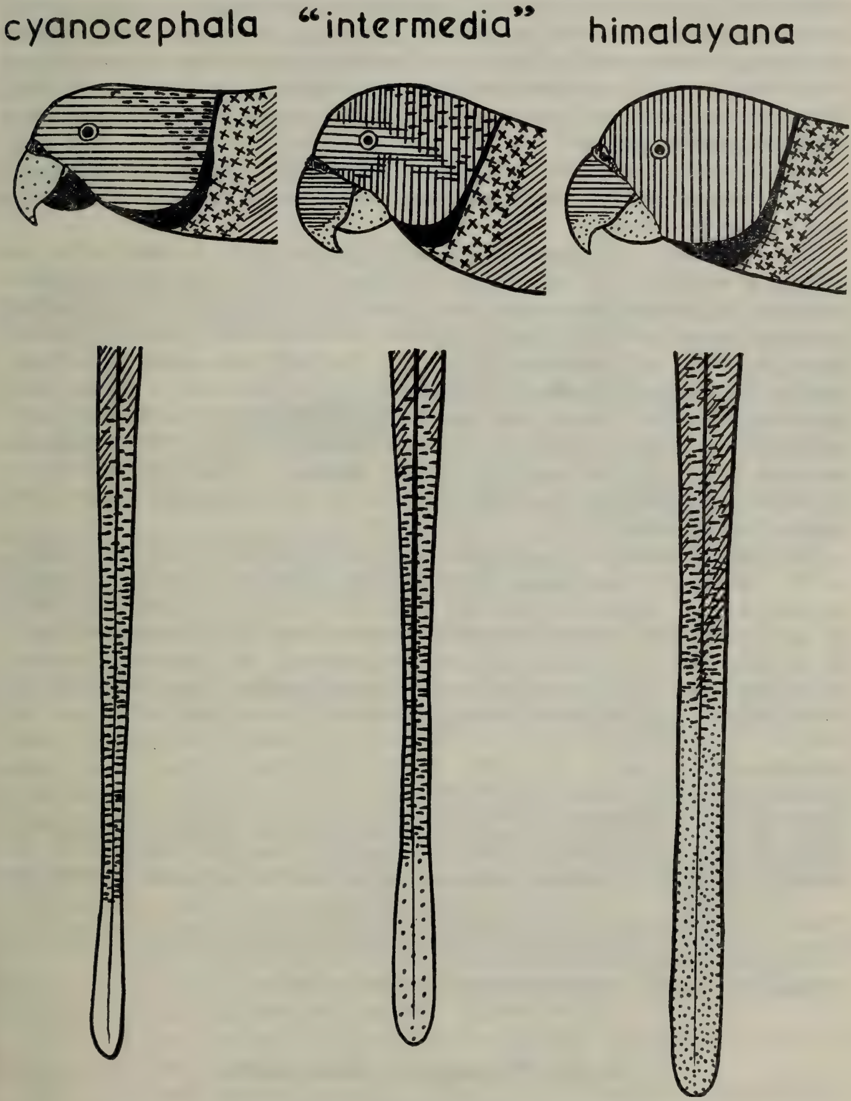


Fig. 1 ($\frac{1}{2}$ nat. size). Diagrams demonstrating the plumage pattern of the head and central tail-feathers (dorsal side, from the tip to the distal end of the wings). Key to colouring: areas shaded with horizontal lines, red; vertical lines, slaty-grey; oblique lines, dark grass-green or yellowish-green; crossed areas, verdigris-green; dashed areas , blue; dotted areas, bright yellow, pale yellowish or yellowish-white; plain, white; black. black. For other characters see the table and the text.

have come from *roseata* where the forehead, lores and orbital regions are dull red and the neck without any verdigris-green; and *finschii* where the head is purplish-grey or lavender-blue and the neck with a very narrow line of verdigris-green. In *roseata* only a very small portion of the tips of the central tail-feathers is pale yellowish-white, in *finschii* the distal two-third of the same is dingy-white, whereas in '*intermedia*' the tips of the central tail-feathers are bright yellow. Moreover, the central tail-feathers are broader in '*intermedia*' than in either of them. Neither of *roseata* and *finschii* has as much yellow in the other tail-feathers as '*intermedia*' has. All these characters of '*intermedia*' strongly suggest *cyanocephala* and *himalayana* as its parents.

Thus it can be shown that no other combination of these four species of parakeets than *cyanocephala* and *himalayana* can produce a hybrid like '*intermedia*' in nature.

Hartert writes, "It is probable that *P. intermedia* is a local form, the habitat of which is not yet known." It may be that there was a sudden outbreak of these hybrids whish may have disappeared by now. If further investigation reveals the presence of more of these birds in nature, then of course it will be of the greatest interest to find out how common they are, whether they are sterile or not, whether effective gene-flow is taking place between the parent forms, and whether the hybrids are so common and well localised geographically as to constitute a subspecies connecting the parental forms. As however the parent species overlap widely without common hybridization, it seems most likely that they will retain their status of good species.

I am most grateful to Dr. Amadon for sending us the skin of '*intermedia*', to Dr. Vaurie for examining the remaining skins for us at the former's request, to Mr. Macdonald and Dr. Lack, F.R.S. for giving me full liberty to use the British Museum (Natural History) and the Alexander Library of the Edward Grey Institute (Oxford) respectively. Dr. Cain was, as usual, most generous in discussing with me various points connected with the problem and making important suggestions.

References:

Baker, E. C. S. 1927. *Fauna of British India*. 4.
Biswas, B. 1951. Revision of Indian birds. *Amer. Mus. Novit.*, 1500: 1–12.
Biswas, B. 1953. A Check-list of genera of Indian Birds. *Rec. Ind. Mus.*, 50(1): 1–62.
Hartert, E. 1924. Types of birds in the Tring Museum. *Nov. Zool.*, 31: 126.
Husain, K. Z. 1959. Taxonomic status of the Burmese Slaty-headed Parakeet. *Ibis* 102: 249–250.
Peters, J. L. 1937. *Check List of Birds of the World*. 3: 246.
Ripley, S. D. 1953. Consideration on the origin of the Indian avifauna. *Nat. Inst. Sci. India*. 7: 269–275.
Rothschild, W. 1895. On a new parrot. *Nov. Zool.* 2: 492.

White Plumage in Blackbirds

by Mr. Noble Rollin

Received 2nd February, 1959

When young Blackbirds, *Turdus merula* Linnaeus, and Song Thrushes *Turdus philomelos* Brehm, were being hand-reared in 1951 it was noticed that the bases of the tail feathers were white. Subsequently counts in the field showed a much higher proportion of white marked Blackbirds in urban areas than in rural areas. It was deduced that in both wild and experimental birds some factor in the *feeding* caused the white plumage and further investigations were outlined (Rollin, 1953).

It has now been found that by varying the amount of live animal food, in this case earthworms (Lumbricidae), in the diet of young Blackbirds, it is possible to produce at will areas of white, grey or brown-black (normal) in the growing tail feathers. Further, an adult Blackbird, originally normal, has been produced with the head and neck white under long term controlled feeding, even in the presence of an unlimited supply of earthworms. This bird appears to be similar in every way to the type of white marked Blackbird found in the wild. The conclusion is inescapable that feeding is the normal cause of the white marked Blackbirds seen in the wild.

BLACK, GREY AND WHITE

For convenience the birds have been numbered 1–11. Figure 1 illustrates a tail feather from a young bird, No. 6. The outer part (A) was the normal brown-black of a male juvenile Blackbird. The rest of the feather (B) was white*. All the tail feathers were the same and all the young birds studied, except No. 1 (normal throughout) and No. 3, showed the same pattern with the distal portion normal and the proximal part white or grey. In No. 3 the tail turned grey and then was restored to normal by increasing the live animal food, resulting in a normal tail with a grey band across it.

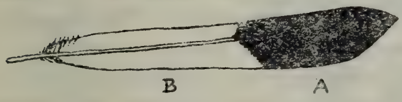


Figure 1.

---

*This feather, accidentally shed, was replaced by a completely white feather.

The foods used were earthworms, mealworms (Tenebrio), dog biscuits and two of the best known brands of thrush (Turdidae) insectivorous food. These insectivorous foods are claimed to be rich in protein and to contain dried meat, milk, insects and fruit; dripping, yeast, honey, glucose, minerals and cod liver oil. The insectivorous food and the dog biscuits were fed in a moist condition. The birds were hand-reared from about 12–13 days old. All were from normal stock, known to produce normal progeny, breeding in the wild in the Station at Glanton. All the birds tested were already growing normally coloured tail feathers.

The feeding and resultant feather colouring was as follows:—

1. Fed with insectivorous food, mealworms and a large number of earthworms fresh from the garden. Result: no trace of white or grey in the tail feathers. The bird was normal in every way.

2. As 1. but without any earthworms. Result: growing tail feathers changed to grey.

3a. The feeds were alternated. About 60% were of dog biscuits and 40% earthworms. Result: tail feathers grew grey.

3b. The percentage of earthworms was then increased and other food, including cod liver oil and milk, was given. Result: feathers began to grow brown-black (normal) again.

4. Fed exclusively on insectivorous food. Result: the feathers grew grey.

5. As 1., then one week exclusively on dog biscuits. Result: at the end of the week the new feather growth was grey.

6. Fed exclusively on insectivorous food, then exclusively on dog biscuits. Result: the feathers grew pure white.

7a. Fed exclusively on dog biscuits. Result: the feathers grew pure white.

7b. Earthworms subsequently supplied to 7a but the tail feathers continued to grow white.

From the above it will be seen that (i) with insectivorous food and an ample supply of mealworms and earthworms the plumage is normal, Bird No. 1; (ii) with insectivorous food, and more particularly with dog biscuits, and an inadequate supply of live food, particularly earthworms, grey feathers are produced, Birds No. 2 and No. 3. Grey feathers were also produced with insectivorous food exclusively, Bird No. 4. and by one week of dog biscuits exclusively, Bird No. 5; (iii) dog biscuits following insectivorous food, or dog biscuits alone, produced pure white feathers, Birds No. 6 and No. 7.

Where a bird was growing grey feathers, Bird No. 3, they were easily changed back to brown-black by increasing the earthworms and other food. On the other hand a bird growing white feathers, Bird No. 7, continued to grow them white when supplied with earthworms. This suggests that the change to white is more permanent than the change to grey.

The feather growth of Song Thrushes, although not studied systematically behaved in the same way, producing normal, diluted brown and pure white under similar conditions.

The Blackbirds after rearing are housed outside in large aviaries with an inexhaustible supply of earthworms, together with a continuous supply of poultry pellets. Under these conditions they moult out normally year after year. These conditions which produce normal plumage are described below as N *conditions*. The following adult birds in normal plumage lived under N. conditions, except that No. 8 had in addition insectivorous food from May until after the moult; No. 9 was fed on pellets exclusively in February, March and April; No. 10 was fed exclusively on pellets and a limited amount of insectivorous food from January to the third week in June; No. 11 was fed exclusively on pellets February, March and April, pellets and unlimited insectivorous food exclusively in May and first three weeks in June, and then N. conditions and unlimited insectivorous food.

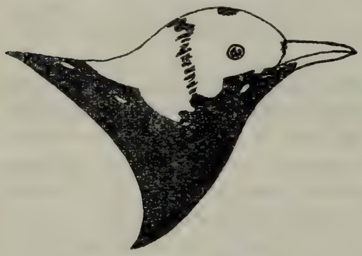


Figure 2.

Nos. 8, 9 and 10 moulted out normally. No. 11 moulted out with much of the head and neck white.

The white plumage of No. 11 was symetrically disposed on either side and is illustrated in Figure 2. It is evident that the long period on prepared foods from February to the third week in June was a contributory cause of the white plumage. No. 10, which moulted out normally had prepared food from January to June but N conditions *only* after this. No. 11 had insectivorous food (of which birds are very fond) as well as N conditions from June onwards, and it is thought that it was a food preference for this insectivorous food which finally caused the white plumage. An all-day watch (Ref. No. 197) was made on this bird in early October and compared with an all-day watch (Ref. 196) already made in September on another Blackbird living under conditions N only, which moulted out normally. These watches (see Figure 3), which were based on what the bird was doing each minute during the day, were made by F. J. Bendle, E. V. Bendle, V. Elliot, A. King, D. C. N. Rollin and the author.

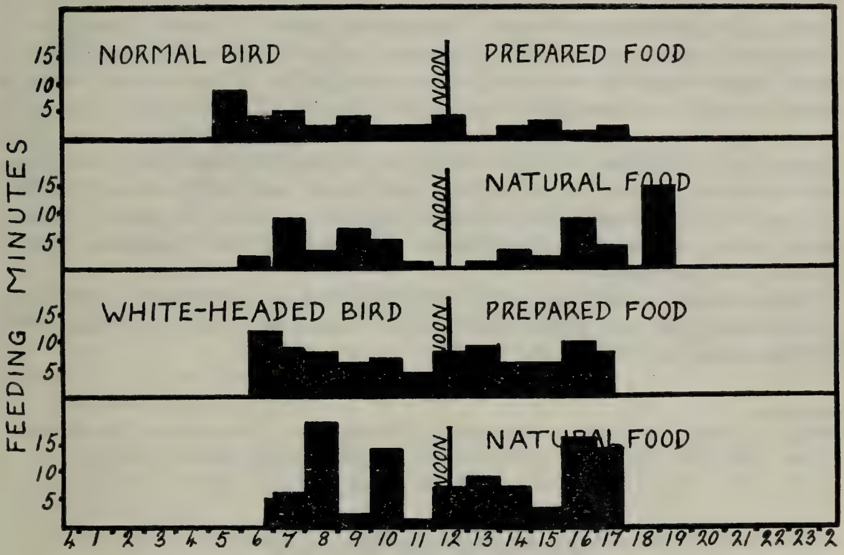


Figure 3.

The normal bird satisfied its initial morning hunger with prepared food (pellets) and then ate successively less as the day went on, developing its natural feeding (including earthworms) with a peak in the evening. The white-headed bird, after initial satisfaction of morning hunger with prepared food (mainly insectivorous food), ate prepared food solidly right through the day. This feeding was interspersed during the day with many natural feeding minutes but much of this natural feeding time was spent in digging up earthworms in a place where they were very small, averaging 0.05 grams each. These were obviously ''tit-bits''. The bird never bothered to dig up a single large earthworm although there were plenty available in other parts of the aviary. The *amount* of food taken in the natural feeding minutes was thus altogether less than in the prepared food minutes. The totals for the day (given below) show that besides spending much more time feeding than the normal bird, the white-headed bird spent proportionally more time on prepared food.

	Prepared Food Minutes	Natural Food Minutes
Normal Bird	40	60
White-headed Bird	86	95

It is suggested that because Blackbirds are so much more fond of insectivorous food than pellets, that the white-headed bird, after a long period on prepared food, continued by preference to eat an excess of this food over the moult period, thus producing the white plumage. The other Blackbirds, after varying periods on prepared food, all had a pre-moult and moult period under N conditions, when due to less preference for pellets they did sufficient natural feeding to produce normal plumage. It is suggested that similar conditions may occur in the wild, especially in urban areas where in winter in times of scarcity of live animal food a preference may be developed for prepared food. This preference, exercised in the period preceeding and during the moult, especially in late July, August and Sepetmber, when in addition to other sources there are scraps from picnics in parks, camps and so forth, could well be the cause of white plumage in wild Blackbirds. Similar causes no doubt operate in many other species, especially urban species such as the House Sparrow, *Passer domesticus* (Linnaeus).

These studies were made at the World Bird Research Station, Glanton, Northumberland; the young birds were studied between 1953 and 1957 and the adults in 1957–1958.

Reference:

Rollin, N. (1953). "A Note on Abnormally Marked Song Thrushes and Blackbirds", *Trans. Nat. Hist. Soc. Northumberland and Durham*, Vol. X, pp. 183–184.

Review of the Races of the Cape Wagtail, *Motacilla capensis* L.

by Dr. J. M. Winterbottom

Received, 23rd March, 1959

Five forms of *Motacilla capensis* L. have been described. In 1911, Ogilvie-Grant separated the Kenya and Uganda birds as *wellsi*; in 1929, Neumann divided off the Angola population as *simplicissima*; and in 1932, Roberts described new forms from South West Africa (*bradfieldi*) and Portuguese East Africa (*beirensis*).

We can dismiss the first two forms briefly. *M.c.wellsi*, with a deep black chest-band and a deep smoky colouration above, and *M.c.simplicissima*, in which the chest-band is reduced to a spot and sometimes virtually absent, are well-marked subspecies. There remain for consideration the two races described from southern Africa by Roberts.

M.c.bradfieldi was said to be darker than *capensis*, especially on the sides of the face. Roberts himself, however, in 1940, admitted the form was invalid when he stated "Three subspecies have been named from South Africa . . . ; but there are probably only two admissible within our limits, the typical western one and an eastern one . . . *beirensis.*" Nevertheless, the name was revived by Vincent (1952) and sustained by McLachlan and Liversidge (1957). A series of five topotypical examples from Swakopmund seem to me, however, quite indistinguishable from *capensis;* and Macdonald (1957) appears to have come to similar conclusions.

M.c.beirensis has had a wider currency. It was said to be yellower below and faintly tinged with yellowish on the back. The latter character is not perceptible by me in either of the two topotypes I have seen. The amount of yellow on the underparts is an exceedingly variable character in *M.capensis*. From a long series of these Wagtails I picked out 13 which were especially yellow below. They included one of the two topotypes of *beirensis;* and others from the south-west Cape (4), northern Cape, Orange Free State, Natal, southern Portuguese East Africa (2), Southern Rhodesia (2) and Bechuanaland Protectorate—in other words, from the whole range of *M.capensis* south of the Zambezi and Kunene except the karoo and South West Africa.

It had also been suggested to me that Cape birds differed from those from Natal in being less olivaceous above and in having the crown and nape blue-grey. This, too, I am unable to confirm as a consistent character. I would agree, however, that there is a tendency for eastern birds (Natal and Portuguese East Africa) to be yellower below and less grey on the head than those from the Cape; but the differences do not begin to approach the "separate 75%" convention. I therefore conclude that there is only one form of this Wagtail recognisable from southern Africa, namely *Motacilla capensis capensis*.

Summarising the races:

1. *Motacilla capensis capensis* L.

Motacilla capensis Linnaeus, Syst. Nat., 12th ed., 1, 1766: 333—Cape of Good Hope.

Synonyms: *Psamophilus capensis beirensis* and *P.c.bradfieldi* Roberts, Ann. Tvl. Mus., 15, 1932: 29—Zimbiti (near Beira) and Swakopmund respectively.

Characters: Olivaceous grey above; white, washed to a variable extent with yellow below; with a complete and broad dark grey band across the chest.

Range: The whole of Africa south of the Zambezi and Kunene except the Chobe area of southern Bechuanaland and the Caprivi Strip. Meets the next race at Kasane, Chobe River, where both forms occur.

Measurements: 47 ♂♂: wing, 79–91, av. 85.5 mm.; tarsus, 18–25, average, 22.9; culmen, 18–20, average, 19.0.

42 ♀♀: wing, 77–86, average 82.6 mm.; tarsus, 17–25, average, 22.3; culmen, 17–20, average, 18.5.

Material examined: South-west Cape, 16; Eastern Cape, 23; Natal, 11; Karoo, 13; Northern Cape, 2; Highveld, 10; Bechuanaland Protectorate, 4; Southern Rhodesia, 15; South West Africa, 5; Portuguese East Africa, 12: total, 111.

2. *Motacilla capensis simplicissima* Neum.

Motacilla capensis simplicissima Neumann, Orn. Monatsb., 37, 1929: 176—Angola.

Characters: Similar to the preceding but with the chest-band reduced to a spot, sometimes entirely absent. One specimen from the eastern Kafue Flats shows a complete band, but much narrower than in *M.c.capensis*. It is assumed to be an intermediate. Males average slightly smaller than *capensis* males.

Range: Angola, the Caprivi Strip, Northern Rhodesia, Katanga and Nyasaland. The species is rare (perhaps only a straggler) in the middle Zambezi region and the subspecific status of these birds is unknown.

Measurements: 9 ♂♂: wing, 79–86, average, 81.9 mm.; tarsus, 22–26, average, 24.0; culmen, 15–20, average, 18.1.

7 ♀♀: wing, 80–84, average, 81.7 mm.; tarsus, 20–26, average, 23.7; culmen, 17–19, average, 18.8.

Material examined: Northern Rhodesia, 13; Bechuanaland Protectorate, 3: total, 16.

3. *Motacilla capensis wellsi* O.-Grant

Motacilla wellsi Ogilvie-Grant, Bull. B.O.C., 29, 1911: 30—Kigezi, S.W. Uganda.

Characters: Deep smoky black above; below, chest-band, usually complete but sometimes broken at the sides, and deep black.

Range: Kivu, Uganda, inland Kenya, northern Tanganyika.

Measurements: 2 ♂♂: wing, 82, 85 mm.; tarsus, 78; culmen, 18, 19.

2 ♀♀: wing, 82 mm.; tarsus, 24; culmen, 18, 20.

(No measurements of a series appear to have been published).

Material examined: Kenya, 1; Uganda, 2; Tanganyika, 1: total, 4.

ACKNOWLEDGEMENTS

For the loan of material, I must thank: the Director and Mr. J. D. Macdonald, British Museum (Natural History); the Directors, Museum Dr Alvaro de Castro, Lourenco Marques; Durban Museum; East London Museum; Natal Museum, Pietermaritzburg; National Museum of Southern Rhodesia, Bulawayo; the Director and Mr. O. Prozesky, Transvaal Museum, Pretoria. The work on which this paper is based was done while I held a Senior Bursary of the South African Council for Scientific and Industrial Research.

References:
J. D. Macdonald, 'A Contribution to the Ornithology of Western South Africa,' 1957.
G. F. McLachlan and R. Liversidge, 'Roberts' Birds of South Africa,' 1957.
A. Roberts, 'The Birds of South Africa,' 1940.
J. Vincent, 'A Check List of the Birds of South Africa,' 1952.

The Races of *Euplectes capensis* (L.) in the Cape Province

by DR. J. M. WINTERBOTTOM

Received 10th December, 1958

Four races of the Yellow Bishop, *Euplectes capensis* (L.), have been described from the southern part of its range; but both W. L. Sclater (1930) and J. Vincent (1952) have placed the two described by Roberts, namely *macrorhyncha* (*Euplectes capensis macrorhyncha* Roberts, 1919) and *knysnae* (*Xanthomelana capensis knysnae* Roberts, Ann. Tvl. Mus., 8, 1922: 266–Knysna) in the synonymy, leaving only two races, *E.c.capensis* and *E.c.approximans* (Cab.).

Recently collected material in the South African Museum from the area that might be supposed to be inhabited by *macrorhyncha* caused me to suspect that that race might be valid; and I therefore assembled additional material from the Durban, East London and Transvaal Museums, to the authorities of whom my thanks are due for the loan.

There can be no doubt as to the distinctness of *capensis* and *approximans;* the questions at issue were whether *macrorhyncha* was distinct from *capensis;* and what was the status of *knysnae*, placed as an intermediate between *capensis* and *approximans* by Sclater and as a synonym of *approximans* by Vincent.

In his original description of *macrorhyncha*, Roberts separated it solely on its larger bill. Later (1940), he stated that the general dimensions were larger too and that the mandible of the full-plumaged male was wholly white, whereas in typical *capensis* it was usually only partly white. I had at my disposal 41 skins of these two forms. Of these, those in which the wing measured 87 mm. or more and the culmen 22 mm. or more and had the mandible wholly white numbered 11, all except one from the country from the lower Berg River north. Moreover, of the 11 skins from this northern area, all except one, in which the mandible was only partly white, showed all three of these characters. Of the 30 skins from further south, one (from Kalabaskraal, south of Malmesbury) showed all three *macrorhyncha* characters and nine showed two of the three. Therefore 96% of these birds were separable as of one race or the other and *macrorhyncha* must be maintained.

The position in respect of *knysnae* is less satisfactory. Only two birds, one in non-breeding plumage, were available. The wing and culmen measurements were intermediate between *capensis* and *approximans* and the only breeding bird had a white mandible. I therefore agree with Sclater in placing *knysnae* as an intermediate between *capensis* and *approximans* and not worth nomenclatorial recognition.

Summarising, I would recognise three races of *Euplectes capensis* from the Cape Province, as under:

1. *Euplectes capensis capensis* (L.)

Loxia capensis Linnaeus, Syst. Nat., 12th ed., 1, 1766: 306—Cape of Good Hope.
Mandible of breeding male wholly white, partly white or wholly black. Intermediate in size between the other two races.
Measurements: Wing, 84–92 mm., av. 86.7; culmen, 18–23, av. 20.6.
Range: From Malmesbury and Tulbagh to Mossel Bay.
Thirty examined from Cape Flats, Malmesbury, Stellenbosch, Tulbagh, Kalabaskraal, Worcester, Retreat, Caledon, Cape Town, Durbanville, Zoetendalsvlei, Still Bay, Kuils River, Mamre and Eerste River.

2. *Euplectes capensis macrorhyncha* Roberts

Euplectes capensis macrorhyncha Roberts, Ann. Tvl. Mus., 6, 1919: 117—Klaver.
Mandible of the breeding male wholly white; larger.
Measurements: Wing, 87–97 mm., av., 89.6; culmen, 22–24, av. 23.0.
Range: From the lower Berg River and the Cold Bokkeveld (Ceres District) to Little Namaqualand.
Eleven examined from Verloren Vlei, Citrusdal, 12 miles north of Clanwilliam, Cold Bokkeveld, Lokenburg, Kamiesberg, Berg River and Pakhuis Pass.

3. *Euplectes capensis approximans* (Cab.)
   Orynx approximans Cabanis, Mus. Hein., 1, 1851: 177—South Africa (restricted to De Bruins Drift, Fish River, Eastern Cape).
   Mandible of the breeding male wholly black. Smaller.
   Measurements: Wing, 76–81 mm., av. 78.7; culmen, 14–17, av. 15.7.
   Range: From the Eastern Cape to the Transvaal Low Veld, intergrading with *E.c.capensis* at Knysna.
   Four examined from Sibudeni, Pietermaritzburg and Peddie.

The work on which this paper is based was done while the author held a Senior Bursary of the South African Council for Scientific and Industrial Research.

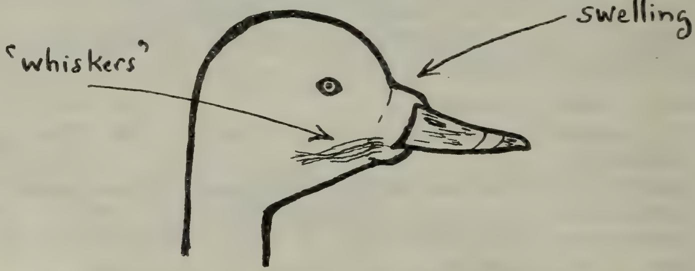
References:—
A. Roberts (1940), *The Birds of South Africa* : 347.
W. L. Sclater (1930), *Syst. Av. AEth.*, 2: 762.
J. Vincent (1952), *A Check List of the Birds of South Africa*: 107.

A Female Pochard, *Aythya ferina* (Linnaeus) with a Deformed Skull

by MR. E. H. GILLHAM

Received 17th January, 1959

On the 17th May, 1957, and subsequently, until early June, in St. James's Park, London, I saw a female Pochard with a deformed skull. This took the form of a distinct swelling at the base of, and all round, the bill, extending about half-an-inch in from the side ridges and culmen. On the right hand side of the bulge, near the base of the lower mandible, there were a number of cat-like 'whiskers'—presumably abnormally developed feathers—growing out at right angles to the bill. The longest 'whiskers' were about two inches in length and slightly curly at the ends. Later in the year this bird was reported to me as "a Pochard with some gut fishing line sticking out of its mouth".



Note on the Occurrence of Bulwer's Petrel (*Bulweria bulwerii*) in the Indian Ocean

by MAJOR W. W. A. PHILLIPS

Received 24th January, 1959

On 23rd August, 1958, a live, dusky-black petrel was brought to me by a Maldivian boy who reported that he had captured it, the previous evening, on the southern reef-shore of Fedu Island. The secondaries had been cut, to prevent flight, but otherwise the bird was in good condition. It was a female.

Fedu Island is within half a mile of Gan, in the extreme south of Addu Atoll, the southernmost atoll of the Maldive Islands; it lies in latitude 0°36′30″ South and longitude 73° East.

The bird was forwarded to the Bird Room, British Museum (Natural History) where it was identified by Mr. R. W. Sims as a specimen of Bulwer's Petrel (*Bulweria bulwerii*), a species that hitherto had not been recorded from the Indian Ocean.

It is curious that a Bulwer's Petrel should have wandered so far from its usual haunts in the Atlantic but, long experience of the Indian Ocean, leads me to believe that many more pelagic species wander into it, either regularly or casually, than we have definite knowledge of at present.

On the Status of the Northern Rhodesian Population of *Cyanomitra batesi*

by Mr. J. G. Williams

Received 12th March, 1959

It has been suggested that the recently discovered population of *Cyanomitra batesi* (Ogilvie-Grant) in the Mwinilunga district of Northern Rhodesia might represent an undescribed geographical race. Through the courtesy of Mr. C. W. Benson I have had the opportuntiy of examining a series of 4 specimens (3 males, 1 female) of this sunbird collected on the Sakeji River, Mwinilunga district, Northern Rhodesia. These specimens have been compared with two topotypes of *Cyanomitra batesi* from River Ja, Cameroons, and with a single specimen from the Ogowe River, Gaboon, sent to me on loan by Dr. Dean Amadon, American Museum of Natural History.

Measurements of specimens examined:

Northern Rhodesian specimens, wing 52–55: exposed culmen 13.5–15 (to base 15.5–17); tail 26–28; tarsus 15–16. (3 adult males).

Wing 50; exposed culmen 14 (to base 16); tail 26; tarsus 14 mm. (1 adult female).

The two topotype males measure wing 52; exposed culmen 14.5–15 (to base 16.5–17); tail 27–28; tarsus 15.

The single male from Gaboon measures: wing 51; exposed culmen 14 (to base 16); tail 26; tarsus 14.5 mm.

Chapin (Birds of the Belgian Congo; 4: p. 206) gives the following measurements of West African and Congo specimens of *Cyanomitra batesi:* wing 46–53; culmen to base 17–18; tail 23–30: He cites a male from Fernando Po with a wing measurement of 54; tail 30 and culmen to base 18 mm.

On the above mesurements the Northern Rhodesian specimens cannot be separated from birds from other parts of the Ethiopian Region. On colour characters also the Rhodesian examples of *Cyanomitrax batesi* are indistinguishable from Cameroons and Gaboon material.

A Further Note on Variation in *Cossypha natalensis*

by Mrs. B. P. Hall

Received 8th April, 1959

Clancey in his recent paper on the races of the Robin-Chat *Cossypha natalensis* says of two specimens collected on the Luau River, eastern Angola that they "appear to me inseparable from *C.n.hylophona*" (Bull. B.O.C. 79, 1959: 62). He gives the colour of the crown of *hylophona* as Amber Brown. These two specimens, a male and female, not two females as stated by Clancey, were discussed by me (Bull. B.O.C. 78, 1958: 155) and it must be reiterated that they are quite unlike, the male having a dull olive-brown head and the female a rich rufous head. They represent the extremes of variation found in the populations of central Africa, and the fact that this amount of variation can be shown by two birds which were collected in the same net should not be ignored in any discussion on variation within this species; furthermore it makes it impractical to recognise *hylophona* as other than a variant or colour phase of *C.n.intensa.*

The Status of the Great Black Woodpecker in the British Isles

by Mr. R. S. R. Fitter

Received 12th December, 1958

PART TWO

In the Home Counties there is a remarkable clumping of records in 1844–50, when Berkshire 1 (April 1844), Middlesex 3 (May 1845), Essex 1 (June 1847) and Surrey 2 (1848–50) could all have been caused by a couple of birds wandering about the Home Counties, ending with a foray into the Midlands to produce Rutland 1 (c1850) and Warwickshire 1 (1851) within about 25 miles of each other.

In or near the New Forest there are scattered records over a period of about 75 years, in 1836–41, June 1862, c1887, May 1889 and June 1913, while the Dorset and Isle of Wight records and Hampshire 4 are all within 25–30 miles of the New Forest and two of them within the same period.

The most suggestive aggregation of records is in the Welsh Border area of Herefordshire, Forest of Dean and Brecon, where the following series of nine or ten occurrences is on record:

Ruckhall Wood, Eaton Bishop, June c1874
Belmont, 1 mile from Eaton Bishop, spring 1879
Weston under Penyard, summer 1880
Dinas, near Brecon, May 1885
Pengethley Gorse, Ross-on-Wye, twice prior to 1888
Fownhope, prior to 1888
(Little Doward, prior to 1888)
Forest of Dean, 1890's
Kington, Nov. 1901
Builth Wells, April 1903

These birds were reported by seven different observers, none of them apparently in touch with each other, and it is hard to resist the conclusion that one or two Great Black Woodpeckers, perhaps occasionally breeding, were present in that comparatively little-watched area for a period of 30 years. It is at any rate much more likely that the crucial Builth Wells record of 1903 was a survivor from this small population than that it had originated from the Suffolk introduction nearly 140 miles to the eastward six years previously.

Seasonal Distribution.

Since it seems probable that a large proportion of the British records of the Great Black Woodpecker have been due to very small resident populations (perhaps of only one or two birds ranging widely in search of mates), it is not surprising that an analysis of their month-by-month distribution does not fit the hypothesis of normal migration. Table II contains all uninvalidated records that can be dated.

TABLE II. BLACK WOODPECKER RECORDS BY MONTHS AND SEASONS

Month		*Season*		*Total*
March	3			
April	3			
May	4			
		spring	2	12
June	4			
July	2			
August	—	summer	2	8
September	1			
October	1			
November	1			
		autumn	—	3
December	3			
January	1			
February	—	winter	3*	7

*Warwickshire 1 was seen in the hunting season and so is most likely to belong to this quarter too.

The remarkable scarcity of late summer and autumn records militates strongly against the idea that immigration of Black Woodpeckers can be at all common at this season, and suggests either that they wander in spring or that they are not usually seen until some time after their arrival, and then especially at the season in spring and early summer when they are seeking mates and their loud voice and other habits make them more conspicuous.

APPENDIX I.

RECORDED OCCURRENCES OF THE GREAT BLACK WOODPECKER IN THE BRITISH ISLES

CORNWALL

1. Crowan, near Camborne, a female or immature on 29th July, 1945 (R. H. Blair, *Ann. Rep.*, *Cornish Birds*, 1946, p. 19). The bird flew from the S. (in which direction the sea is only seven miles away) and seemed very tired; pitching in a bush by the road, it

allowed a close view (30 yards) facing the observer for one minute before flying off into Pendarves woods. About the size of a Rook, it had the undulating flight of a woodpecker, and apparently uniformly black plumage. No red could be seen on the head (ruling out adult male in which the whole crown is red), but the back of the head could not be seen when the bird was at rest. The head appeared to be hammer-shaped, i.e. it had a posterior projection. The only discrepant detail is the bill, which was long and strong with an apparent downward curve. Presumably on the ground of this discrepancy, the late B. W. Tucker considered the record ''unconvincing'' (MS note), but it might well have been an optical illusion and does not in itself make possible confusion with some other bird more likely.

DEVON

1. The Tunstall MS (Fox 1827), written by Marmaduke Tunstall in 1783–84, included a statement that he had ''been informed by a gentleman well versed in ornithology that the Picus Martius or Large Black Woodpecker has been sometimes seen in Devonshire''. There is no mention of *Picus martius* in Tunstall's *Ornithologia Britannica* (1771), so that his information can be dated to some time between 1771 and 1784. Tunstall's note, unpublished till 1827, was evidently the source of Latham's (1787) statement that ''I have heard mention of this species having been seen in the southern parts of this kingdom; and Mr. Tunstall tells me that he has been informed by a skilful ornithologist of its being sometimes seen in Devonshire''. It may well also have been the source of Fothergill's (1799) statement that ''this noble species has now and then been met with in England . . . once in Devon'' and of the reference to Devon in his unpublished MS of 1807. Donovan (1794–1819) says ''it is very rare in this country and generally believed to have been only observed in the southern parts and in Devon''; he then goes on to quote Latham. We do not know who Tunstall's informant was, but it was clearly not Montagu, for Montagu (1802) also quotes Latham.

2. Crediton, a female shot about 1830 (Pidsley 1891) was in 1865 in the collection of a Mr. Newton of Okehampton (*Zoologist*, 23: 9847). There was no doubt about the identification of this bird, but according to D'Urban and Mathew (1895) ''possibly some doubt about its being killed in Devon''. Strong circumstantial support for their doubts derives from the fact that J. B. Rowe deliberately left the record out of the third edition of Samuel Rowe's *A Perambulation of Dartmoor*, which he revised and edited in 1896; it had been in previous editions.

3 & 4. On 20th November, 1871, Professor Westwood, an Oxford entomologist, said that ''Mr. C. Robertson, of Oxford, assured him that he had repeatedly seen the bird in the woods at Clovelly, and Mr. Jackson, of New College, had observed it in East Devon'' (*Zoologist*, 1872, p. 2914). In both these cases there may well have been a confusion with the Great Spotted Woodpecker.

5. Mount Edgcumbe, one seen by the Rev. Clement Ley in April 1876, ''when standing with my daughter close to a thick oak coppice and waiting for a few minutes we got a fine view of the bird'' (Bull 1888; *Zoologist*, 1889, pp. 340–44). Mr. Ley heard the bird before he saw it; for a statement of his field experience, see Herefordshire 1.

SOMERSET

1. Street, one prior to 1851 (Baker, *Proc. Som. Arch. & N.H.S.*, 1: 144; Dresser 1871–81).

2. Porlock district, ''a small rook behaving like a woodpecker'' seen in 1935 (E. C. Clegg, *Devon Bird Report*, 1938).

3. Dunster, while shooting on 10th December, 1938, G. F. Luttrell saw a woodpecker whose colour was black; it flew past him so near that he could have shot it (*Devon Bird Report*, 1938). Hendy (1943) had no doubt that the bird was a Great Black Woodpecker.

4. Porlock, a woodpecker, larger than a Green Woodpecker, which looked entirely black, in October, 1944 (E. C. Clegg, *Devon Bird Report*, 1945).

WILTSHIRE

1. Longleat Park, one killed during rook shooting ''some years'' before 1887, on the testimony of Mr. Pope of Kingston Deverill, in whose collection it was before passing to that of James Rawlence of Bulbridge, Wilton (Smith 1887; G. B. Hony, *Brit. Birds*, 7: 281). Hony relates that in 1897 the son of the man who stuffed it remembered it coming to his father from Longleat to be stuffed. This record was not known to Gurney, and is as well attested as any 19th-century record can now be.

DORSET

1–3. Pulteney (1799) writes "Body black, cap scarlet. Shot in the Nursery Garden, Blandford; also at Whitchurch and other places in Dorset". Gurney (Dresser 1871–81) points out that "body black, cap scarlet" is merely the translation of the Linnean description, with which Pulteney prefixes all his species accounts, and cannot therefore be regarded as a description of any of the specimens mentioned. However, it now appears that the Blandford bird was the specimen in Lord Stanley's collection (see Lancashire 1.).

4. McIntosh (1851), who lived at Charborough, claimed to have seen Great Black Woodpeckers in Charborough Park more than once. For an indication of his reliability, see Surrey 2.

ISLE OF WIGHT

1. Shanklin, one shot by Archdeacon Hill in the garden of the parsonage many years before 1845; although the archdeacon was no naturalist, Bury (*Zoologist*, 3: 915) had no doubt, from his description, that the bird was a Great Black Woodpecker.

HAMPSHIRE

1. Christchurch, two frequently seen in a small preserved wood near, some time between 1836 and 1841; it was hoped that they would stay and nest, but they were disturbed by being watched too frequently and left the wood (Yarrell 1839–41); one shot and in the collection of Lord Malmesbury, Heron Court (Wise 1880).

2. New Forest, one seen at ten yards' range in Pignel Wood, near Brockenhurst, by W. Farren, a dealer, in June 1862; described as a "large black bird" with "some red on head". On 9th June four eggs were taken from an old Green Woodpecker's nest hole from which the bird had been seen to emerge; they were pure white, differently shaped from a Green Woodpecker's, more like a Great Spotted Woodpecker's but more pointed than either. In 1880 the eggs were in the collection of J. R. Wise, author of *The New Forest*; at least one expert who saw them believed them to be abnormal eggs of the Green Woodpecker. However, even if the eggs were those of a Green Woodpecker, this would not necessarily invalidate the sight record. (Farren, *Zoologist*, 20: 8091; Wise 1880).

3. Benstead, one alleged to have been shot in 1865 proved to have emanated from Leadenhall Market (Gould, *Zoologist*, 1869, pp. 1516, 1562).

4. Dewar (1899) records that a keeper near his home in North Hampshire shot a large bird with habits like the Green Woodpecker but with coal-black plumage relieved by a little red, in winter about 1879.

5. New Forest, one seen at close range by a Belfast sportsman two miles from Lyndhurst Road Station in the spring of 1887 (Rev. E. T. Daubeny, *Nature Notes*, 14: 34).

6. New Forest, a pair seen at twenty yards' range on a beech near Stony Cross on 14th May, 1889, by Mrs. Anderson, who was familiar with the three native woodpeckers (Kelsall, *Zoologist*, 1893, p. 395).

7. New Forest, two seen by Capt. C. Ley in June 1913 (Haines 1936).

SUSSEX

1. When T. D. Pigott (1903) wrote to the *Times* reporting the Sheringham Great Black Woodpeckers, he had a letter saying that the bird had also been seen in Sussex in 1903.

KENT

1. Orlestone, one seen on top of a telegraph pole in a railway cutting near Bourne Wood by R. T. Filmer at the beginning of January, 1905; it was entirely black with a red patch on its head, and the size of a jackdaw. A similar bird was seen by Balston's keeper, a Mr. Stickles, not far away, apparently about the same time. (Balston *et al.* 1907).

SURREY

1. Battersea Fields, one shot on the trunk of an old willow tree in the winter of 1805 (Montagu 1813). Fothergill refers to this bird in two MSS written before he left England in 1816. In one dated 1807 he says: "Mr. Haworth has a very good specimen of the male of this species. He informed me that one was taken near Battersea a few years ago

which fell victim to a cat''. (Note that Fothergill says nothing as to the provenance of Haworth's own specimen.) In a second MS Fothergill writes, ''Mr. Haworth told me of a fine specimen killed near Hales in Surrey opp't Chelsea I think in 1806 and weep ye ornithologists for 'twas given to a cat. One of the birds that was formerly more numerous *in Battersea Fields in* 1805 *or* 6.'' The words in italics appear, according to J. L. Baillie (*in litt.*) to have been added later in a darker ink and not to be intended to qualify the words immediately preceding them. Mr. A. H. Hall, Librarian of the Guildhall Library, whom I consulted on the location of Hales, which is not a known place in Surrey, has found a Hales Place in Lambeth, not far from the Battersea boundary, in Cruchley's 1839 map of London.

2. Esher, a pair bred at Claremont for three years running prior to November 1850, on one occasion at least in a hole (much smaller than the observer's hand) in a brick wall which they plastered with clay; a specimen was shot by a Mr. Storey and could be seen adorning the walls of the Black Bear Inn as late as July 1856 (McIntosh 1851, 1857). Though, unlike our native woodpeckers, the Great Black Woodpecker will use the same hole for several years running, and though it will take possession of another woodpecker's hole instead of excavating its own, this hole seems to have been much too small and the plastering of the entrance with clay appears to be without precedent. This last fact alone is enough to cast suspicion on an already unlikely record. Even if the specimen record could be validated, this would not of itself support the breeding record.

3. Croham Hurst, near Croydon, a large black bird, the size of a Chough, with the typical undulating flight of a woodpecker, a long yellow bill and a call reminiscent of a Greenshank or a Green Sandpiper but much lower in pitch, flew towards G. W. Lloyd and right over him at a height of 20ft. on an afternoon in early summer in 1925 or 1926, while he was addressing the ball at the second tee on the golf course. The light was good and the sun shining. Mr. Lloyd was convinced he had seen a Great Black Woodpecker. The description of the call seems adequate and the red on the head, especially if the bird were a female, would not necessarily be visible from the angle at which the bird approached and went away from the observer. (G. W. Lloyd, *in litt.*, 9.7.45).

4. Walton-on-Thames, a bird somewhat similar to Berkshire 4 was seen at close range feeding on his lawn at Burhill Park, ten miles S. E. of Sunningdale, by H. F. Faure on 19th August, 1956. It was ''quite a lot larger than the Green Woodpecker, more the shape of a Rook, with a smooth head and long thin beak of a very dark colour possibly black. It had red on the nape of the neck, otherwise was a uniform colour all over which can best be described as dark oakstain colour'' (H. F. Faure, *in litt*). This description does not correspond to the normal plumage of any known woodpecker.

ESSEX

1. Audley End, one seen in the park on 5th June, 1847, was put up from the ground, where it appeared to have been feeding, and flew to a high tree, uttering a note similar to but louder and hoarser than the Green Woodpecker. Alfred Newton, who put this occurrence on record (*Zoologist*, 1851, p. 3278), said at the time that he had no doubt that his informant was not mistaken. In 1851 he was only 18, but he seems never to have specifically withdrawn it.

HERTFORDSHIRE

1. Hatfield Park, one about the size of a Green Woodpecker but black all over except for a white bar on each wing and a red crest on the head; watched for several minutes pecking at ants on the fairway on the golf course till it flew away with a typical woodpecker flight; probably in July 1937 (L. Buxton, *Field*, 31.7.37; Rev. E. Buxton, *in litt.*, 11.2.49). In this case the size is wrong and there is the extraordinary discrepant detail of the white wing-bar; one of the strongest arguments for the existence of melanic Green Woodpeckers.

2. Hitchin, one seen by Mrs. E. M. Flauva and her husband in a garden on 5th December, 1944; a large bird, 18–20 in. long, jet black with a beautiful red top to its head, the colour reaching down to its neck; prodding the ground for insects on a tennis court, then flew rather clumsily to a tree and clung to it (P. Good, *in litt.*, 6.12.44; Mrs. E. M. Flauva, *in litt.*, 14.1.45. This appears to be as good a field description of a Great Black Woodpecker as can reasonably be expected from a non-ornithologist, who is however familiar with our three native woodpeckers.

MIDDLESEX

1. Fothergill, in his unpublished MS dated 1807, states: ''My specimen, which was a female and which is now in Burton's possession, was killed near Chelsea. The bird must have been obtained since 1799, as he does not mention it in his *Ornithologia*

Britannica published in that year. It is unfortunate that Fothergill does not relate any of the circumstances of the bird's occurrence at Chelsea.

2. According to Blyth (*Field Naturalist*, 2: 49; 1834) one was shot "somewhere in the northern vicinity" of London about 1830. The specimen was inadequately preserved and perished from moth.

3. Ken Wood, one seen on three days out of four in May 1845 by Mr. Spencer, "the well known taxidermist of Great Portland Street", whose brother was Lord Mansfield's keeper, at a range of a hundred yards in the thickest part of the wood (Harting 1866). Spencer, being a taxidermist, must have known his birds; the fact that he failed to shoot the bird and could only report it as a sight record makes it more reliable than if he had produced a corpse.

4. Regent's Park, one escaped from the London Zoo on 9th October, 1897 (Harting 1901).

BERKSHIRE

1. Windsor, one seen in the Home Park on several consecutive days in April 1844 by a Mr. Walter (Kennedy 1868). Kennedy, who was only 16 and still at Eton when he published his book, said that he had no reason to doubt the word of the observer, who "gave so accurate a description of the bird as to leave no room to doubt that it was a veritable *Picus martius*".

2. Wytham Wood, one brought to a colleague of Professor Westwood of Oxford as having been shot there recently had its proventriculus full of *Formica herculanea*, an ant unknown in Britain; announced at an Entomological Society meeting on 6th November, 1871 (*Zoologist*, 1871, p. 2875). At a further meeting of the Society a fortnight later it was stated that several presumably Norwegian birds had been seen on Leadenhall Market at about the same time as the bird was supposed to have been shot at Wytham by "a labouring man" (Ib., 2914), and one can but agree with Mr. E. Sheppard, who "could not reconcile the appearance of a gigantic species of ant, not hitherto known as British, in the crop of a bird the origin of which was open to doubt, with the idea that this bird had actually been shot under the circumstances already alleged".

3. Twyford, one seen at about seven yards' range about 1881 by Capt. and Mrs. F. G. Coleridge, who were familiar with stuffed specimens of the Great Black Woodpecker; it was the size of a Jackdaw, black with a red crown, and was tapping at the dead branch of a fruit tree in a garden (Reid, *Zoologist*, 1888, p. 107).

4. Sunningdale, one on 14–27th January, 1933, seen at close range by C. M. Meares and others (*Field*, 151: 262). The bird was rather stumpier and fuller than a Green Woodpecker and had a red crest. Its plumage was not coal black but greyish-black like coke or cinders. The late B. W. Tucker considered that it was a melanic Green Woodpecker (*Oxfordshire Bird Report*, 1933).

BUCKINGHAMSHIRE

1. Ditton Park, one watched for half a minute at close range, busily engaged on a tall elm till it flew off with an undulating flight, in March 1867 by Clark Kennedy (1868), who was aged 14½ at the time.

SUFFOLK

1. Brandon, seven or eight young birds brought from Sweden in 1897, kept for a time in an aviary and released (Southwell 1904). This introduction was no doubt responsible for the next four records, and perhaps also for Norfolk 3. Southwell (1908; *Brit. Birds*, 2: 29) refers to "numerous reports of its appearance on the borders of Norfolk and Suffolk, in the neighbourhood of Thetford, Brandon and Euston", so there may well be more records that did not find their way into print.

2. Ixworth, 14 miles S.E. of Brandon, a male in July 1897 (Daubeny 1902).

3. Euston Park, 8 miles S.E. of Brandon, a pair three weeks later than the Ixworth bird (Daubeny 1902).

4. Brandon, one followed by two others, 16th April, 1902 (Daubeny 1902).

5. Euston Park, one on 24th October, 1902 (W. Sparrow, *Nature Notes*, 13: 229).

NORFOLK

1. Billingford, one shot, evidently in 1835, and reported in *Proc. Linn. Soc.* (Eyton 1836) became Yarrell's (1839–41) record of two shot at Scole (the next village to Billingford) and reported in *Proc. Zool. Soc.* Some years later the man who shot the bird(s) agreed that it/they was/were probably Great Spotted Woodpecker(s) (H. Stevenson, *Zoologist*, 22: 9248; 1864).

2. W. Ogilvy (*Zoologist*, 1873, p. 3372) relates a rumour of a Great Black Woodpecker sent from Norfolk to Leadenhall Market in November 1872.

3. Sheringham Park, two seen and well described by a lady in the summer of 1903, and what were probably the same birds at Westwick nearby shortly beforehand (Pigott 1903). These may well have originated from the introduction at Brandon, 40 miles S.W.

NORTHAMPTONSHIRE

1. In September 1891 Lord Lilford wrote to F. D. Drewitt rejoicing in the recent acquisition of "the first Great Black Woodpecker that, as far as I know, has ever been seen in this country". At the end of October 1892 he reported the very recent acquisition of a second Great Black Woodpecker. (Both letters are in the memoir on Lilford by his sister.) Lilford died in June 1896, having in the previous year published his *Notes on the Birds of Northamptonshire*, in which he mentions the Great Black Woodpecker, "of whose occurrence in our country we have a report", adding that it had "no real claim" to be a British bird. When the Yorkshire bird of 1897 was exhibited at the Linnean Society, the President, Dr. Günther, said that the year before his death Lilford had released his two Great Black Woodpeckers "in consequence of their ailing in health". Notwithstanding the reason why Lilford's birds had been released, Howard Saunders remarked at the same meeting that the Yorkshire bird was possibly one of these two.

GLOUCESTERSHIRE

1. Forest of Dean, one seen in the 1890's by Thomas Gee (Haines 1936).

2. Bristol, one watched in good light at a range of 15–20 yards in his garden in Coombe Lane, by A. S. Burrows in June 1954. The bird's plumage was all black, except for a bright red head and crest, the red having the appearance of a mane; it was about the size of a Rook.

HEREFORDSHIRE

1. Eaton Bishop, one seen in Ruckhall Wood in June about 1874 by the Rev. Clement Ley, in company with his cousin E. E. du Buisson, who was then aged 10–12 but clearly remembered the incident 15 years later. Though Ley gave no details of identification, he was familiar with the Great Black Woodpecker on the Continent, and claimed to have learnt its note there so that he was able to recognise it in England. To his query, whether any sane man could mistake a Great Black Woodpecker flying at less than twenty yards range with the sun behind him, nobody who has had field experience of the bird could fail to answer no. (Ley, *Zoologist*, 1889, p. 340; Bull 1888).

2. Belmont, one mile from Ruckhall Wood, one seen in the spring of 1879 by D. R. Chapman, Curator of the Free Library Museum at Hereford, whose attention was called to the bird by his son as it flew from a copse to a tree standing in open ground. He followed it up and had a clear view of the bird at rest (Bull 1888).

3. Frogmore, Weston-under-Penyard, a pair seen in the summer of 1880 by Captain Mayne Reid (Bull 1888). They passed over his head, "one flying behind the other at an interval of a hundred yards or so. They lit in a tall linden tree near the house, only to stay in it for a few seconds; then continued their up and down flight towards some hanging woods beyond, where I lost sight of and never saw them again". Reid published the occurrence at the time in the *Live Stock Journal* and later wrote about it in his posthumous *A Naturalist in Siluria* (1889); he died in October 1883. The fact that Reid was a well known author of sensational novels seems somewhat unjustifiably to have been held against his bird record.

4–7. The Rev. Clement Ley, writing to Bull (1888), claimed that in addition to his Herefordshire (1874) and Devon (1876) sight records, he had "on two or three occasions heard the note of this bird in the neighbourhood of Ross without being able to get a sight of it". In the *Zoologist* in 1889 (p. 340) (actually a reprint of a letter in the *Hereford Times* in reply to critics of his records in Bull's book), he specified these occurrences as follows: "I heard the cry of *Picus martius* twice, unmistakably, at Pengethley Gorse, Ross; once, unmistakably, in the parish of Fownhope; once, dubiously, distant and uncertain, on the Little Doward". All these places are in the Wye valley within ten miles of Ross and Weston-under-Penyard. If Ley can be regarded as a reliable observer for the two sight records, his three "unmistakable" sound records must also be accepted.

8. Kington, a bird the size and colour of a crow with a longer beak was seen feeding round the trunk of a sycamore in the grounds in front of his house by "a gentleman of Kington" on 24th November, 1901 (G. Townsend, *Zoologist*, 1902, p. 26).

(*to be concluded*)

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 3/- each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

15th September, 20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

- 5 OCT 1959
PURCHASED

BRITISH MUSEUM

Edited by
DR. JEFFERY HARRISON

Volume 79
No. 7

October
1959

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

Volume 79

Number 7

Published: 1st October, 1959

- 5 OCT 1959
PURCHASED

The five hundred and seventy-fourth meeting of the Club was held at the Rembrandt Hotel, S.W.7., on Tuesday, 15th September 1959, following a dinner at 6.30 p.m.

Chairman: CAPTAIN C. R. S. PITMAN

Members present, 21; Guests, 2; Total, 23.

An informal discussion took place on the future of the Club and the many constructive suggestions will be considered by the Committee.

Dr. James Harrison exhibited a Wigeon X Shoveler Hybird, a full account of which will appear in a subsequent Bulletin.

The Status of the Great Black Woodpecker in the British Isles

by MR. R. S. R. FITTER

Received 12th December, 1958

PART THREE

WORCESTERSHIRE

1. The Great Black Woodpecker was stated to be "of infrequent occurrence" in Worcestershire by Hastings (1834).

2. When T. D. Pigott (1903) wrote to the *Times* reporting the Sheringham Great Black Woodpeckers, he had a letter saying that the bird had also been seen in Worcestershire in 1903.

WARWICKSHIRE

1. Newnham Paddox, near Lutterworth, General the Hon. Sir Percy Fielding and several others had a good view of one for some time while old Newnham Wood was being drawn by hounds (and so presumably in January-March or November-December), in 1851 (Pigott 1903).

SHROPSHIRE

1. Shrewsbury, a specimen from Lord Hill's collection, said to have been taken perhaps about 1863, is in the City Museum at Birmingham (Haines 1903; L. Bilton, *in litt.*)

BRECONSHIRE

1. Dinas, near Brecon, one seen and heard on 25th May, 1885 (Phillips 1899, and *Zoologist*, 43: 305). Phillips first heard the note coming from a large oak; it was very loud indeed, quite as loud as and totally unlike any woodpecker's note he had ever heard before; exactly like the cry of a Curlew when first disturbed, but louder and more weird-sounding and almost human in its shrillness. A large black woodpecker, larger and slenderer than the Green Woodpecker and with a slightly forked tail then flew out of the tree with a very quick bold sweeping flight; it was heard twice more but not seen again. The only discrepant detail here is the forked tail, but of course any bird may appear to have a forked tail when it is moulting.

2. Builth Wells, one seen and heard on 19th April, 1903 (Walpole-Bond 1904). *In litt.* dated 13th January, 1954, Mr. Walpole-Bond kindly supplied the following elaboration of this important record:

'Hearing a cry, to me recalling in some respects one of the Common Curlew's utterances, obviously issuing from a grove of oaks near Builth Wells, Brecknock, I investigated. There I found that it emanated from a Black Woodpecker, resplendent in all-black plumage, except for a vivid red crown. This occurrence, however, did not greatly impress me, since I looked on the bird as an "escape". Its flight, as it eventually made for another wood, was *very* undulating and peculiarly laboured.'

FLINTSHIRE

1. R. Clwyd within two miles of St. Asaph, one seen in the spring or early summer (probably on 7th May) of 1874 by Father John Gerard, S. J. "A black bird like a curious crow with a woodpecker flight . . . fetched up on a tree and clung to the trunk". (*Times*, 25th August, 1903).

LINCOLNSHIRE

1. J. C. Dale, the entomologist, in a letter dated 21st September, 1836, (*Mag. of Nat. Hist.*, 9: 599) mentioned a specimen "lately" shot in Lincolnshire, and this is presumably the one referred to by Yarrell (1839–41). It is not mentioned by Blathwayt (1914).

RUTLAND

1. Wardley Wood, a black-coloured woodpecker flew close past a farm bailiff outside the wood about 1850 (Haines 1903).

NOTTINGHAMSHIRE

1. Macgillivray (1840) had "two specimens in my collection, a male and a female, which I purchased from Dr. Madden to whom they had been sent by their owner as having been shot near Nottingham. That gentleman afterwards obtained for me a certificate of the fact by the person who procured them". These specimens were labelled "Nottingham" in Macgillivray's hand-writing in his collection in the Aberdeen University Museum (Whitaker 1907).

2. Mansfield, one seen in the grounds of Park Hall a few days after Christmas 1907 by Francis Hall, and again in the same place 2–3 days later by Mr. and Mrs. Hall. Hall, who at first mistook the bird for *Hylatomus pileatus*, with which he was familiar in Canada and of which he had a stuffed specimen at Park Hall, soon saw that it was shorter and stouter than the American bird. He was quite familiar with the three British woodpeckers, and described this bird as half as large again as a Green Woodpecker and black with a scarlet top to its head. Shortly before this a keeper in some big woods about five miles away told J. Whitaker that he had seen a "black jay" about as big as a jay and quite black. (Whitaker, *Brit. Birds*, 1: 386).

DERBYSHIRE

1. Melbourne, one seen running up the bole of an oak in the winter of 1841, by J. J. Briggs; it was like a jackdaw with a patch of bright red feathers at the back of the head (Hudson Read, who has access to Briggs's MS notes, *in litt.*, 18.8.45).

CHESHIRE

1. Delamere Forest, a woodman, a good naturalist who knows the three other woodpeckers, saw a large coal-black woodpecker, with a red top-knot larger than a Green Woodpecker's, climbing a pine twenty yards away in July 1936. He described the bird as "proper like a Green Woodpecker dipped in tar except for its crown" (R. C. R. Allen, *in litt.*, 1945).

LANCASHIRE

1. One reported shot in Lancashire by Lord Stanley (Montagu 1813). D. L. Serventy informs me (*in litt.*, 29.5.57) that he has a copy of the 1813 edition of Montagu's *Ornithological Dictionary*, which was originally owned by Lord Stanley, later 13th Earl

of Derby, who died in 1851. This Serventy bought from Wheldon and Wesley's in London in 1956, some duplicates from the library at Knowsley having been disposed of by the present Earl. In this copy there are several marginal annotations in Lord Stanley's handwriting. Under "Woodpecker, Great Black", where Montagu had written "Lord Stanley assures us that he shot a *Picus martius* in Lancashire", Stanley has underlined the words "assures us" and written in the margin: "*not* so. I said I had one in Lancashire but not that it had been shot there. In fact my Bird was shot near Blandford in Dorsetshire". That is to say, Lancashire 1 is really Dorset 1.

Mr. R. Wagstaffe, Keeper of Vertebrate Zoology of the Liverpool City Museums has kindly searched the Derby collections there for me, but without success. A catalogue of woodpeckers in the Derby Museum in 1898 does not list it, but in the original MS catalogue a specimen is mentioned as having been purchased at the sale of the Leverian Museum in 1806. This specimen may well have been the Blandford bird, but cannot now be found.

YORKSHIRE

1. Fothergill (1799) mentions a Yorkshire occurrence. This was presumably the female bird which he stated in his 1807 MS that he had seen near Beningborough Wood, about six miles from York, in which case he was aged no more than 17 when he saw it. It must also form the basis of the statement in the same MS that the bird "has been more frequently noticed in the woodlands of Yorkshire . . . than in other parts."

2. Yarm, a pair once seen in the grounds of The Friarage by T. Meynell of York (Hewitson 1831–38). This is the furthest north Great Black Woodpecker reported from the mainland of Great Britain.

3–4. Yarrell (1839–41) mentions two specimens killed in Yorkshire but not preserved. These may be the same as the two Yorkshire records mentioned by Allis (1845). There is no evidence that either the Beningborough or the Yarm birds were killed, so the reference may be to two quite different birds.

5. Ripley, a male shot on the Ingleby estate about 3rd March, 1846, now in the possession of J. Stubbs, birdstuffer of Ripon (J. Garth, *Zoologist*, 1846, p. 1298).

6. One with some capercaillie on Leadenhall Market on 6th November, 1868, was said to have come from Hull, but was more likely to have originated in Sweden (Gurney, *Zoologist*, 1869, p. 1515).

7. A male weighing 10 oz. was sent from the neighbourhood of Hull to Relph, game dealer of York, on 13th November, 1879, and was presented by Mrs. Relph to the Rudston collection in the Yorkshire Museum (where it still was in 1946) in February 1880. Morris (1852) says the Great Black Woodpecker weighs 20–22 oz.; the discrepancy in weight could be accounted for by the bird being an exhausted migrant, but the neighbourhood of Hull is against it. I am indebted to Mr. R. Wagstaffe for drawing my attention to this apparently unpublished record, not mentioned by either Nelson (1907) or Chislett (1952).

8. Otley, one shot on 8th September, 1897, in the presence of Colonel W. C. Dawson; exhibited at a meeting of the Linnean Society on 18th November, when Howard Saunders said that it seemed possible that it might have been one of the two released by Lord Lilford in 1895 (*Proc. Linn. Soc.*, 1897–2, p. 2), an opinion upheld by Nelson (1907). As, however, Lilford's birds were in poor health this seems extremely unlikely. See above (p. 107) for a discussion of the Suffolk introduction.

9. Ripon, one watched for some time on 7th March, 1909, by A. C. Finlay, who identified it from the plate in Morris's *British Birds*, (*Field*, 113: 549). Chislett (1952) considers the data unconvincing, but it is another case of whether or no you can trust the observer's knowledge of birds.

SCOTLAND

1. From a statement by Sir R. Sibbald in *Historia Animalium in Scotia* (1684) Yarrell (1839–41) considered that one or more Great Black Woodpeckers had occurred in Scotland, but this was shown to be incorrect by E. C. Buxton in 1865 (*Zoologist*, 23: 9730).

2. Belmont, Unst, Shetland, one recorded by Crotch (*Zoologist*, 1861, p. 7341) was considered by Gurney to have been an error for the Northern Great Spotted Woodpecker (*Denarocopos major major*), although Crotch mentions another species "not *P. major* but like it". It could be due to a *lapsus calami*.

GREAT BRITAIN

1. A specimen formerly in the collection of Donovan, who died in 1837, now in Derby Museum, Liverpool, was said to have been killed in this country (Yarrell 1839–41). It was not mentioned by Donovan (1794–1819).

2. A specimen in a museum at Birmingham about 1844–45 was said to have been taken in England (McIntosh 1851). This may have been the specimen listed in the catalogue, published in 1832, of the Birmingham Museum of Natural History (L. Bilton, *in litt.*). It is not clear, however, whether there actually was a specimen in the museum at the time the catalogue was compiled.

Either of these two specimens could have formed the basis of Hastings's vague reference to the occurrence of the Black Woodpecker in Worcestershire, of Dale's and Yarrell's to a Lincolnshire specimen, or of Yarrell's and Allis's to two Yorkshire specimens.

APPENDIX II: A Note on Charles Fothergill's MSS

Charles Fothergill was born at York in 1782, and so was aged only 17 when he published his *Ornithologia Britannica* in 1799. In 1816 he emigrated to Canada, where he died in 1840. It was not until 1931 that his MSS on British natural history, now in the Royal Ontario Museum of Zoology, were rediscovered. I am much indebted to Mr. H. Lumsden for first drawing my attention to this valuable and hitherto unknown source of information on the Great Black Woodpecker, and to Mr. J. L. Baillie of the Division of Ornithology at the Museum for transcribing for me several extracts from the MSS. These extracts have now been printed both on p. 105 of Vol. IV of Bannerman's *The Birds of the British Isles* and, less completely, on p. 23 of the *Field* for 6th January, 1945.

There are two MSS, one dated 1807 and the other 1815. Both mention a Great Black Woodpecker killed near Battersea in about 1805, also recorded by Montagu (1813). The 1807 MS gives the factual basis of Fothergill's statement that the Great Black Woodpecker had occurred in Yorkshire and also adds one entirely new record, a specimen killed near Chelsea.

ACKNOWLEDGMENTS

I am much indebted to the numerous correspondents who have helped me since I began this enquiry in 1945, with the aid of an appeal in the *Bulletin* of the British Trust for Ornithology.

REFERENCES

ALLIS, T. (1845). Report on Birds of Yorkshire. *Rep. Brit. Ass. Adv. Sci.*, 1844.
BALSTON, R. J. *et al.* (1907). Notes on the Birds of Kent.
BANNERMAN, D. A. (1955). The Birds of the British Isles, Vol. IV.
BLATHWAYT, F. L. (1914). Birds of Lincolnshire. *Trans. Lincs. Nat. Union.*
BRITISH ORNITHOLOGISTS' UNION (1883). A List of British Birds.
— — — — — — — — — — — (1915). A List of British Birds.
BULL, H. G. (1888). Notes on the Birds of Herefordshire.
CHISLETT, R. (1952). Yorkshire Birds.
DEWAR, G. A. B. (1899). Wild Life in Hampshire Highlands.
DONOVAN, E. (1794–1819). The Natural History of British Birds.
DRESSER, H. E. (1871–81). A History of the Birds of Europe.
D'URBAN, W. S. M. & MATHEW, Rev. M. A. (1892). The Birds of Devon.
EYTON, T. C. (1836). A History of the Rarer British Birds.
FOTHERGILL, C. (1799). Ornithologia Britannica. York.
FOX, G. T. (1827). Synopsis of the Newcastle Museum. Newcastle-on-Tyne.
GOODWIN, D. (1956). *Brit. Birds*, 49: 339–49.
HAINES, R. (1903). The great black woodpecker (*Picus martius*). *Field Nat. Quarterly*, 2: 138–41.
HAINES, C. R. (1936). Great black woodpeckers in Britain? An investigation of occurrences. Field, 167: 527.
HARTING, J. E. (1866). The Birds of Middlesex.
— — — — — (1872). A Handbook of British Birds. Revised ed., 1901.
HENDY, E. W. (1943). Somerset Birds and Some Other Folk.
HEWITSON, W. C. (1831–38). British Oology.
HASTINGS, Sir C. (1834). Illustrations of the Natural History of Worcestershire.
KENNEDY, A. W. M. C. (1868). The Birds of Berkshire and Buckinghamshire.
LATHAM, J. (1787). Supplement to "A General Synopsis of Birds".
LILFORD, Lord: Lord Lilford. A Memoir by his Sister. 1900.
MACGILLIVRAY, W. (1840). A History of British Birds. Vol. III.
MCINTOSH, W. (1851, 1857). *Naturalist*, 1: 20; 7: 91.
MONTAGU, G. (1802). Ornithological Dictionary.
— — — — — (1813). Supplement to the Ornithological Dictionary.
MORRIS, Rev. F. O. (1852). A History of British Birds. Vol. II.

NELSON, T. H. (1907). The Birds of Yorkshire.
NEWTON, A. (1893–96). A Dictionary of Birds.
PHILLIPS, E. C. (1899). The Birds of Breconshire. Brecon.
PHILLIPS, E. CAMBRIDGE (1892). The Great Black Woodpecker in England. *Trans., Woolhope N.F.C.*, 1889, 392–3.
PIGOTT, T. D. (1903). *The Times*, 22. viii. 1903; *Bull. B.O.C.*, 32: 32.
PIDSLEY, W. E. H. (1891). The Birds of Devonshire.
PULTENEY, R. (1799). Catalogues of the Birds . . . of Dorsetshire.
SMITH, Rev. A. C. (1887). The Birds of Wiltshire.
SOUTHWELL, T. (1904). *Trans. Norfolk & Norwich Nat. Soc.*, 7: 737.
van IJZENDOORN, A. L. J. (1950). The Breeding-Birds of the Netherlands. Leiden.
WALPOLE-BOND, J. A. (1904). Bird Life in Wild Wales.
WHITAKER, J. (1907). Notes on the Birds of Nottinghamshire.
WISE, J. R. (1880). The New Forest. 3rd ed.
WITHERBY, H. F. *et al.* (1912). A Hand List of British Birds.
— — — — — — — —(1919–24). The Practical Handbook of British Birds.
— — — — — — — —(1938–41). The Handbook of British Birds.
YARRELL, W. (1839–41). A History of British Birds. Vol. II. Newton's revised ed. of this volume was published in 1876–82.

The Plain-backed Pipits of Angola

by MRS. B. P. HALL

Received 13th March, 1959

White (Ibis 1948:547–553) discusses the characters and relationship of the two sibling species *Anthus leucophrys* Vieillot and *A.vaalensis* Shelley. He shows that in many parts of southern Africa a darker, long-clawed species, *A.leucophrys*, is sympatric with a paler, short-clawed species, *A.vaalensis*. The differences between the two are most marked in South Africa where *A.v.vaalensis* is sandy-coloured and larger than the darker *A.l.leucophrys*. He also mentions that evidence points to *A.leucophrys* having the lower mandible brighter yellow in life than *A.vaalensis*.

In the Rhodesias the differences between the species are less marked, both being represented by darker forms, *A.vaalensis* by *A.v.chobiensis* (Roberts) and *A.v.marungensis* Chapin, and *A.leucophrys* by *A.l.bohndorffi* Neumann. Of these *A.v.chobiensis* is very little different in colour from *A.l.leucophrys*. In addition there is little size difference between the species. Nevertheless where the two species are found at the same place the combination of colour with the length of the hind claw serves to differentiate between them.

When White wrote, little material was available from Angola and the ranges and relationship of the two species there was obscure. Through generous loans of specimens from the Chicago Natural History Museum (referred to as CNHM) and the American Museum of Natural History (AMNH) selected for me by Mr. M. A. Traylor and Dr. C. Vaurie, added to eleven specimens collected in Angola in 1957 (BM), I have been able to examine over fifty specimens from different parts of the country. From these nothing constructive can yet be said of their field characters: their morphological characters confirm White's general conclusions but it is apparent that in Angola identification of individual specimens is not easy, since here the length of the hind claw cannot be readily correlated with dark and light-coloured birds: furthermore there is geographical and individual variation in both species which must be taken into account. The hind claw remains the best distinguishing character, two types being apparent; the first, the *leucophrys* type, is stouter, straighter and usually over 12 mm, the second, the *vaalensis* type, is weaker, more curved and usually under 12mm. From the sample of Angola specimens examined it would seem that *A.vaalensis* is the commoner species, the only representatives of *A.leucophrys* being the following twelve birds:—

(*a*) 1♂ Quilengues, 1♂ 4♀ Mushonge and Capelongo on the Cunene River (all AMNH). These have hind claws of 16, 15, 12, 13, 13.5 respectively, wings 2♂ 91, 96, 4♀ 89–94, bills 17–18. They are a reasonably uniform brown above but with one female rather richer than others. All are washed with rich buff below and stand out from other Angola birds in this respect, but I believe this is largely due to freshness of plumage. The colour of the lower mandible has been given by Ansorge on one January specimen as "yellow-ochre with black tip" and on three other May birds as "pinkish-grey with dark tip".

The consistent small size, and the length and the shape of the hind claw serve to identify these as *A.leucophrys*, and it seems possible that the colour of the lower mandible may vary seasonally. In series they are slightly more rufous than *A.l.leucophrys* of Cape Province and have less white in the tail, but they can be matched with individual Cape specimens. In view of the local and individual variation found in pipits they are best considered as *A.l.leucophrys*.

(*b*) The type of *Anthus gouldi prunus* Meinertzhagen from "Cutatu River, Benguella" (AMNH), a male collected by Ansorge 29th September, 1904. Hind claw 13, wing 96, bill 17.5mm; lower mandible "yellow ochre with black tip". This is a difficult specimen as the hind claw is not wholly conclusive. The type locality was originally given as "Catatu River", but the spelling on the label is "Cutatu" and from the date and sequence of collecting there can be no doubt that this is the Cutato River which forms the boundary of the modern districts of Huambo and Bié. It was therefore collected not far from a series of *A.vaalensis* from Vouga (BM) and Dondi (12°33′S: 16°17′E) (CNHM), and is very similar in colour to some of these from Vouga, being only slightly darker than the darkest of them; at first sight, it is difficult to believe that it can belong to a different species. Nevertheless it is smaller than the Dondi and Vouga series in which nine males have wings of 98–105 and bills of 18–20 mm, and its hind claw tends to be stout and straight though not conclusively long: these two factors lead me to identify it as a *leucophrys*. It is intermediate in colour between the Capelongo *A.l.leucophrys* and *A.l.bohndorffi* of the southern Congo and Northern Rhodesia. Since it is a worn specimen and was probably darker when fresh, it is better united with *A.l.bohndorffi*. *A.g.prunus* is therefore placed, following White, in the synonymy of *A.l.bohndorffi*.

(*c*) 1♂ 1♀ Mt. Moco (BM), 1♂ Mt. Soque (CNHM). Hind claw 12.5, 13, 9, respectively (the latter is stunted and unnatural, perhaps due to breakage): wing 2♂ 101, 102, ♀ 97, bill 18. The colour of the lower mandible of the Moco male, which was the only *A.leucophrys* collected in 1957, was bright yellow, quite distinct from any of the *vaalensis* collected: it is an August bird apparently coming into breeding condition. The Moco female, collected in March, has the lower mandible recorded as "gris yellow". These three mountain birds are the darkest and least rufous in tone of all the Angola pipits examined and match *A.l.bohndorffi* in this respect. As with the type of *prunus* the hind claws of the Moco birds, though not long, tend to be stouter and straighter than in *A.vaalensis;* it is possible that the shorter claws may be due to living on rather more rocky terrain than elsewhere, the Moco male being collected in a grassy patch by a stream at the base of the mountain. Similarly the abnormally long wings for *leucophrys* may be correlated with altitude.

(*d*) 1♂ ''Bange Ngola'' (Bange Angola, 8° 29′S: 15° 52′E) (AMNH). Hind claw 12, wing 95, bill 18. The lower mandible ''yellow ochre with dark brown tip'', collected in October. This is a dark specimen in very worn plumage: it is very slightly browner than the type of *prunus* and all others of *A.l.bohndorffi*, but slightly darker than any *A.vaalensis*. In size it is nearer the average for *bohndorffi* and rather smaller than is usual for *A.vaalensis* in northern Angola. The hind claw is inconclusive. The colour of the bill, combined with the short wing and dark coloration, incline me to believe that it is *A.l.bohndorffi* but the identification is not made with confidence.

(*e*) 1♂ Duque de Bragança (CNHM). Hind claw 15, wing 97, bill 18. This specimen is unique in colour being greyer and paler than *A.l.bohndorffi*. The length of the hind claw and the lack of rufous identify it as *A.leucophrys* but it does not match any described race.

All other specimens examined I believe belong to *A.vaalensis*. They include a number from western districts from Ambaca and Duque de Bragança in the north, south through Benguela to the Sá da Bandeira area in the south west. Also from the Mombolo, Nova Lisboa and Vouga areas in the centre, and three from the eastern districts, Munhango, Lake Dilolo and Texeira de Sousa. Among this series are cotypes of *A.v. neumanni* Meinertzhagen from Ambaca (AMNH) that were matched with the type. These are rather sandy brown and can be matched by others from Mombolo (CNHM), Sá da Bandeira (BM) and one from ''Bulubulu'' (=Vouga) (AMNH). Other birds are darker and less sandy, the darkest being the three from the eastern districts (BM) and others from Vouga (BM): all these were collected after the grass had been burnt and are stained, but it is doubtful if they were ever the sandy tone of typical *neumanni*. Most birds from the central districts are intermediate in colour between the two extremes.

There is also some variation in size: twenty-two males have wings from 97–105 but two others, from Luanda and Leba, near Sá da Bandeira, have wings of only 93 and 94mm; eleven females have wings of 89–102: both sexes have bills from 17–20 and hindclaws 9–12mm. As has already been noted the lower mandibles of ten specimens collected in 1957 were uniformly yellowish-horn in life, notably distinct from the bright yellow of the specimen of *A.l.bohndorffi*, although the specimens of *A.vaalensis* were also collected in August and September and were apparently coming in to breeding condition. In the majority of Ansorge's specimens the lower mandible is noted as ''pinkish-grey'', occasionally as ''Roman ochre'' and in one from Bié district, collected in November, as ''yellow-ochre''.

It is apparent therefore that the Angola population of *A.vaalensis* is variable in all characters. Variation in colour appears to follow geographical lines to a certain extent with sandy birds more common in the west and greyer birds more common in the east. If Angola were to be considered apart from neighbouring territories there would perhaps be some justification for distinguishing two races. However when birds from the southern Congo, Northern Rhodesia and Nyasaland are added to the picture it becomes less practicable to do so, since variations between the sandy and greyer birds are found throughout, and some from as far east as Mzimba, Nyasaland, are indistinguishable from the co-types of *neumanni.* White also recognised the presence of two varieties in the southern Congo and Northern Rhodesia, and used the name *A.v.marungensis* for the more rufous birds and *A.v.chobiensis* for the greyer. He gives the range of *marungensis* as the northern parts of Northern Rhodesia and the southern Congo, and *chobiensis* as Bechuanaland, the southern half of Northern Rhodesia, eastern Angola and Nyasaland. He believed *A.v.neumanni* to be synonymous with *A.v.vaalensis.*

I have recently had the opportunity to discuss this further with him in the light of the new material and he agrees that *A.v.neumanni* can be distinguished from *A.v.vaalensis* by smaller size and less sandy colour. Furthermore he agrees, in view of the variability of the Angola populations, that it is not practical to attempt to deliminate ranges of greyer and more rufous birds, so that *neumanni* must be considered a variable race with a wide range and that *A.v.marungensis* and *A.v.muhingae* White are synonyms.

Conclusions: There is no one certain character on which specific identification can be made between *A.leucophrys* and *A.vaalensis* in Angola. The hind claw is the most reliable character, all specimens in which it is 13mm or over are *A.leucophyrs*, and most specimens in which it is 11mm and under are *A.vaalensis:* exceptional specimens of *A.leucophrys* have shorter claws but they are usually straighter and stouter than those of *A.vaalensis.*

In colour all very grey and very dark specimens are *A.leucophrys*, and all very sandy specimens *A.vaalensis*, but there is no colour difference between many of the darker variations of *A.v.neumanni* and *A.l.leucophrys.*

In size all specimens with a wing of 98mm and over are more likely to be *A.vaalensis*, and under to be *A.leucophrys*, but there is apparently a long-winged population of *A.leucophrys* in the mountains. The bill of *A.leucophrys* rarely exceeds 18mm.

The colour of the lower mandible is variable in both species, but has only been observed to be a really bright yellow in *A.l.bohndorffi.* There is some evidence that this variation is seasonal, but it is not conclusive.

Two or possibly three, races of *A.leucophrys* are found in Angola.

1. *A.l.leucophrys.* Specimens examined from Quilengues and the Capelongo area. Wings 2♂ 91–96, 4♀ 89–94: bills 17–18: hind claws 12–16.
2. *A.l.bohndorffi.* Specimens examined from Mt. Moco, Mt. Soque, Cutato River and possibly Bange Angola. Wings, mountain specimens 2♂ 101–102, 1♀ 97; others 2♂ 95–96: bills 17.5–18: hind claws 12–13 (once 9 – stunted).
3. *A.leucophrys* subsp? 1♂ Duque de Bragança. Wing 97, bill 18, hind claw 15.

One race of *A.vaalensis* is found in Angola, but it is variable, western birds tending to be more sandy, and eastern birds to be greyer.

A.vaalensis neumanni. Specimens examined from Ambaca, Duque de Braganca, Luanda, Benguela district, Sá da Bandeira area, Mombolo, Nova Lisboa, Dondi, Vouga area, Munhango, Lake Dilolo and Texeira de Sousa. Wings 24♂ 93–105 11♀ 89–102: bills 17–20: hind claws 9–12mm.

Notes on *Ploceinae*

PART ONE

by MR. R. E. MOREAU

Received 21st April, 1959

The notes which follow are concerned with points of taxonomic detail and of range that have come to notice in the course of work for this section of Peters' 'Check List of the Birds of the World'. General questions of Ploceine classification are being dealt with elsewhere (Moreau, in press). So far as subspecific variation is concerned, if no questions of time or of publication space were involved it might have been useful to deal with each species at length. In fact this is not practicable; and for many species valuable summaries of variation have been provided by Chapin (1954). His views are in general acceptable; and cases in which subspecific names have been synonymized in his and other recent standard works are not referred to except when I have reason to disagree. It has not been thought necessary to reiterate the names of authors of scientific names already given in Sclater (1930) and other standard works.

I take the opportunity to record two opinions, both shared of course by many others besides myself. First, that it is impossible to be fully consistent in one's acceptance or rejection of subspecific names, which have been, and are still being, applied to every degree of variation, questionable and unquestionable. Second, that nowadays new subspecific names should be promulgated only with reluctance. Especially in Africa, ornithological exploration has reached the stage when most geographical variations that remain to be mentioned are clinal; and in such cases both biology and convenience are usually better served by a comment on the tendency in question than by multiplying names.

I am indebted to the museums named in the following pages for the loan of specimens, while of course my main dependence has been on British Museum facilities. A number of correspondents, mentioned in the text, have most kindly replied to my enquiries.

Amblyospiza albifrons.

Variation in eastern and southern Africa is much more obscure than in West Africa. Schouteden (1958) has recorded the nominate (South African) form from Moba, on the south-west shore of Lake Tanganyika, while Benson (Occ. Pap. Bulawayo Museum) has recently extended the range of *montana* to cover Nyasaland and the Rhodesias. This, in conjunction with the range of *maxima* in the Caprivi strip, isolates the Moba record from the rest of the range of nominate *albifrons*. In fact the population in this area is evidently transitional; the differences are slight in both size and murkiness of colour.

A.a.woltersi Clancey 1956, from Mozambique, is admitted provisionally. I have examined the series available, all females, and find that they are slightly more mottled above (and with paler ground colour) and on average have slightly smaller beaks than *unicolor* from coastal East Africa. No material is available from south of the Tanganyika Central Line. It seems likely that *woltersi* is the end of a cline through the coastal zone of southern Tanganyika and Portuguese East Africa. The naming of *woltersi* without male specimens and apparently without comparison with *unicolor* was premature.

Ploceus superciliosus.

The range is extended to north-western Tanganyika on the basis of a specimen from Bukoba in the museum at München (G. Diesselhorst *in litt.*).

P.baglafecht.

Grant & Mackworth-Praed 'Bull. Brit. Orn. Cl.' 64 : 67 give the situation of the type-locality of *P.b.eremobius*, Chor Mabrue, as north-eastern Belgian Congo at 4° 3′ N., 29° 35′ E. Chapin (1954) gives it as south-western Sudan at 4° 33′ N., 29° 11′ E. The latter is accepted. Actually, the two positions are only about forty miles apart, but they are on opposite sides of the international boundary.

P.baglafecht emini in its pure form appears to be confined to two detached areas, (1) a strip on both sides of the Sudan-Uganda border,

(2) part of eastern Abyssinia, Harar—Arussi. Only nominate *baglafecht* appears to be known in Abyssinia west of the Rift; and in Abyssinia east of the Rift and south of Arussi, and in the northern end of the Kenya Highlands, the birds form a variable population that shows intergrades between *baglafecht* and *reichenow* ("*fricki*", "*nigrotemporalis*"). Through western Uganda *emini* intergrades southwards with *stuhlmanni* and the population in a narrow belt through Bugoma, Budongo and part of Lango is intermediate and variable ("*budongoensis*"). The three names in inverted commas are treated as synonyms.

Ploceus manyar and P.philippinus.

Following the opinion of Dillon Ripley and of Salim Ali (*in litt.*), and *pace* Hall ('Bull. Brit. Orn. Cl.' 77: 46), *P.m.striatus* is taken as synonymous with *P.m.flaviceps* and *P.p.sardarpateli* with nominate *philippinus*.

Ploceus (*velatus*) *reichardi.*

Reichenow (1904) has a record of *reichardi* at Simbaweni, in Tanganyika, far to the east of the present known range. Professor Stresemann tells me that the Simbaweni record cannot be authenticated and it should be ignored.

Ploceus spekei.

This has not been recorded in Kenya west of the Rift (or indeed of the line Nakuru—Naivasha—Nairobi), except for Mau and Kisumu (Jackson 1938). This is a curious distribution but it is confirmed by J. G. Williams (*in litt.*), who also confirms the unexpected finding by Grant & Mackworth-Praed (1946) that *spekei* does not have a dull non-breeding dress, at least in the Kenya Highlands. Including the Kisumu record, the range of *spekei* is separated by over 100 miles from that of *spekeoides*, known only in Uganda north of about 1° 30′ N., east of Soroti and in Lango (C.R.S. Pitman *in litt.*).

Ploceus intermedius.

Birds recently collected in the Rukwa basin, south-western Tanganyika, are nominate, not *P.i.cabanisii*, as they are in eastern Tanganyika (L.D.E.F. Vesey-Fitzgerald and R. H. Smithers *in litt.*).

Ploceus weynsi and *P.aurantius rex.*

These are both extended into north-western Tanganyika on specimens from Bukoba (G. Diesselhorst *in litt.;* Fuggles-Couchman 'Ibis' 1958: 451).

Ploceus xanthops.

Slight changes in greenness or yellowness of plumage and in average size are, as shown by Mrs. B. P. Hall (in press), not sufficient nor geographically consistent enough to warrant using trinomials. Two birds that are slightly the largest of the species come from the neighbourhood of Lake Ngami.

Ploceus ocularis po.

This was described by Hartert on its "larger and more powerful bill" but Amadon (1953) has shown that the difference is negligible.

Ploceus insignis.

The reported tendency of this species to be darker at higher altitudes on the Imatong mountains, Elgon and the Bamenda-Banso highlands ("*okuensis*") was shown by Serle ('Ibis' 1950: 630) to be based on dirty and/or immature specimens. Specimens from the Kenya highlands east of the Rift tend to be more strongly yellow on the breast with some reddish brown on the upper but the difference is not sufficiently great or consistent for the name *P.i.ornatus* (from near Nairobi) to be maintained (*cf.* van Someren 1932, Mackworth-Praed & Grant 1955).

The recent record of *P.insignis* at Gabela in Angola by Henrici ('J. Orn.' 1958: 412) is a remarkable extension of range, being nearly 1,000 miles from the Cameroons locality to the north and much further from the eastern Congo localities to the east. Moreover, Gabela is at a much lower altitude than the montane habitats to which this species is confined elsewhere. I am indebted to Melvin A. Traylor for the information that the Gabela specimen (in the Chicago Museum) is an adult male indistinguishable from a series from East Africa.

Ploceus bicolor.

South African birds (nominate *bicolor*) have black upper parts and no white speckling on head. They extend north at least to Nkandla and Eshowe in Zululand. East African birds (*stictifrons*) have upper parts dark brown, not black, and forehead speckled. They extend at least as far south as Coguno. In the intervening 250 miles, the birds are in varying degrees intermediate between *bicolor* and *sclateri.* This area is predominantly coastal lowlands, but on the border of Portuguese East Africa and northern Zululand, there is a range of low mountains, the Lebombos, rising to about 2,500 feet. Although this elevation is not great, the mountain slopes carry evergreen forest and are evidently markedly different biologically from the coastal lowlands within 20 miles to the east (*cf.* differences in *Tauraco* and *Zosterops*), and two subspecies of *P.bicolor* have been named:—

lebomboensis, type locality Ingwavuma (Lebombo Mountains), nearly as black as *bicolor* but with speckling on the forehead;

sclateri, type locality Mkusi River (probably within about 30 miles of type locality of *lebomboensis*, but in the coastal lowlands); upper parts blackish washed olive, forehead speckled.

Already at Ngoye, at about the same latitude as Eshowe, but nearer the sea and a few hundred feet lower, transition from typical *bicolor* is perceptible: two of the specimens collected by C. H. B. Grant ('Ibis' 1911: 225), still available in the British Museum, are a trifle browner and have a little speckling on the forehead.

For material further north I am indebted to the loan of 16 specimens from the Transvaal, Pietesmaritzburg and Lourenço Marques Museums. Birds from the Lebombo Mountains at Gwaliweni and Mepondine are typical *lebomboensis* but a male (Transv. Mus. 19167) from the type locality, Ingwavuma, is browner and matches *sclateri* from the lowlands to the east. Yet a bird from much further north still, Sabie, fifty miles north of Mepondine and in the lowlands, is practically typical *bicolor* and devoid of speckling, instead of nearest to *stictifrons*, as might have been expected from the situation.

By contrast with the foregoing, the specimens from the coastal area of northern Zululand, and from Portuguese East Africa south of Lourenço Marques, are browner (and with speckled foreheads), namely *sclateri*; but again there is an exception, for a female from St. Lucia (Transv. Mus. 18611) is nearly as blackish as a Lebombo male and is practically devoid of spotting on the head.

On the foregoing data it appears that between about 29° S. and 25° S. there is a transition between *bicolor* and *stictifrons* that proceeds more rapidly in the hotter coastal lowlands than in the more humid interior highlands. The speckling makes its appearance early in both zones, but the stronger melanin of typical *bicolor* persists further north along the Lebombo range, although the altitude is not great. This seems a rather sensitive example of Gloger's rule. Unfortunately, the northern end of this process is not documented. The species is not known to occur in the interior north of Sabie for over 300 miles (eastern border of southern Rhodesia, where the birds are typical *stictifrons* and go up to 5,000 feet—Smithers & Paterson 1957) and in the coastal lowlands the species has not been found between Umbelluzi (near Lourenço Marques) and Coguno.

On the whole, although the distances are so small and the differences are not so constant as one would wish, it is justifiable to accept the names *lebomboensis* and *sclateri* as emphasizing the differences between the darker highland birds and the paler birds of the coastal lowlands. I am indebted to Mr. P. A. Clancey for loan of specimens and much helpful elucidation of the distribution; and to Dr. E. Mayr for personal discussions of this interesting case.

In contrast to this complicated and gradual transition from nominate *bicolor* on the south of *stictifrons*, no transition northwards to the very different *kersteni* is known. It appears that *stictifrons* extends through Portuguese East Africa, the southern edge of Southern Rhodesia and southern Nyasaland to Kilwa District in the coastal belt of Tanganyika Territory (specimens in Berlin Museum, E. Stresemann *in litt.*). Not more than 60 miles further north on the coast *kersteni* has been recorded (A. Haldane *in litt.*) and thence extends north to the Juba River. In the southern half of Tanganyika Territory the range of *kersteni* is far more extensive than hitherto understood, for Berlin Museum has specimens from Mahenge

(E. Stresemann *in litt.*) and Stuttgart Museum from Uwemba, Njombe District, at over 6,000 feet (G. Diesselhorst *in litt.*). This is the first time that a specimen has been collected in a highland locality. Haldane tells me also that he has seen *kersteni* 40 miles still further south in Njombe, at Milo. So far there is a big gap between these localities of *kersteni* near Lake Nyasa and the more coastal records of *stictifrons* to the east.

In the Cameroons Todd applied the name *analogus* to birds from lowlands about 100 miles east of Cameroon Mountain and although Bannerman (1949) gave reasons for synonymizing it with *tephronotus* (type-locality "Cameroon Mountain"), Chapin (1954) did not reject the name *analogus*. On the material available, however, Bannerman was correct, as Chapin (*in litt.*) agrees. There is here no distinction to be drawn between high-altitude and low-altitude populations, because there is no evidence that the species extends above the 5,500 feet mentioned by Serle ('Ibis.' 1950 : 630).

Ploceus xanthopterus.

P.x.castaneigula and *P.x.marleyi* are both "good". Two males of the latter lent by the Transvaal Museum are comparatively large birds, wings 78 and 79, and have disproportionately large and heavy beaks, as claimed by Roberts, when describing *marleyi*, though the colour character he gives is not reliable. The range of this form is Zululand and Natal south to about Durban and it is not known how near it approaches to other populations of this species.

These occupy two areas separated by 500 miles: (1) Caprivi area with contiguous Bechuanaland localities, and south-western Northern Rhodesia down the Zambesi to about 45 miles above the Victoria Falls (M.P.S. Irwin *in litt.*); (2) Portuguese East Africa east of about 34° E., i.e. below Tete (C. W. Benson *in litt.*) and Nyasaland. The western birds, population (1), are the largest (8 males, mostly measured by Irwin, 79–83, one 76); 23 males from Nyasaland south of Lake Nyasa and from P.E.A. (partly measured by Benson and Irwin) only 69–75; three others from further north in Nyasaland intermediate, 76, 76, 79. Further, Irwin, who has been able to compare adequate series in the Bulawayo Museum finds that birds of population (1) are greener than the more eastern birds. Consequently, on both size and colour *P.x.castaneigula* is accepted.

Ploceus cucullatus.

The nominate form is established in Haiti (Bond, 1956, 'Check-list Birds W. Indies'), and *P.c.spilonotus* in Mauritius (Rountree *et al.* 'Mauritius Inst. Bull' 3: 195) and in Runion (Berlioz, 1946, 'Ois. Runion': 63).

P.c.femininus (maintained by Chapin (1954)) is, in agreement with Mackworth-Praed & Grant (1955), synonymized with *P.c.bohndorffi*, which is extended into Tanganyika on a specimen from Bukoba (G. Diesselhorst *in litt.*).

Contrary to Chapin (1954), Mackworth-Praed & Grant kept *nigriceps* as a species distinct from *cucullatus*, on the grounds, it is understood, that both had been reported from the same breeding colony in Uganda by C. R. S. Pitman (*in litt.*), and under the names *P.nigriceps graueri* and *P.cucullatus femininus* at Nyakabande by Peters & Loveridge (1942 'Bull.

Mus. Comp. Zool. 89: 269) and at Kisenyi under the names *cucullatus bohndorffi* and *nigriceps graueri* by Gyldenstolpe (Chapin 1954). Like Chapin, I discount these occurrences as grounds for keeping *nigriceps* and *cucullatus* as distinct species, because this is a transitional area where uniformity of population is not to be expected.

Mackworth-Praed & Grant (1955) treated *graueri* as a synonym of *nigriceps*, following the view they had expressed in 'Bull. Brit. Orn. Cl.' 65: 16, although Mayr had rebutted their arguments in 'Bull. Brit. Orn. Cl.' 65: 42. I have examined seven specimens from Ruanda-Urundi lent by Tervuren; six are at once distinguishable from all East African *nigriceps* as much browner. The seventh is matched by one exceptional coastal bird (from Lamu). In western Tanganyika the species extends south through Kasulu to Kigoma (namely on the eastern border of the *graueri* range) and from this area the birds average a little less brown. However, I use the name *graueri* to cover these birds also. They appear to be separated by some 400 miles from *nigriceps*, which has not been found further inland than the line Kikuyu—Kilosa.

In 'Bull. Brit. Orn. Cl.' 79 (1959): 41–42 Clancey by inference restricted the range of *P.c.nigriceps* to Southern Rhodesia and proposed the name *paroptus* for the birds of the rest of the range currently ascribed to *nigriceps*, which extends north to southern Somalia. The British Museum possesses a very large series from Kenya and northern Tanganyika and for comparative purposes their series from Southern Rhodesia has been supplemented with a series kindly lent by the Bulawayo Museum. The southern birds are found to average clearer yellower below, with less golden or rusty wash, but many birds from the north and south are indistinguishable; e.g. several from Rhodesia, Gazaland and east of Tete are warmly coloured, while others from Tana R., Pangani and Mafia Island are pale. I conclude that the use of a different trinomial is inappropriate.

P.c.dilutescens, recently described by Clancey from the south end of Mozambique, I do not admit for the present. It is true that 7 males lent by Clancey from the type-locality and neighbouring parts of Swaziland and the Transvaal show some admixture of white feathers in the belly, but it is not at present certain how constant this character is in the area concerned, nor what its range may be.

Ploceus melanocephalus.

Chapin (1954) treated *dimidiatus*, *capitalis* and *duboisi* as conspecific with *melanocephalus* and this is undoubtedly correct. The geographical variation of the resultant polytypic species is almost entirely confined to the degree of brownish wash on the underparts. In most of West Africa (nominate) birds have a little below the black of the throat; from Nigeria to Oubangi by Chari (*capitalis*) they have more; and in contiguous parts of the Congo and Tanganyika they have more still.

These last birds are usually called *dimidiatus*, but the type-locality of this is Kassala, isolated from the Uganda birds by some 800 miles of the south-eastern Sudan. Although *dimidiatus* has been reported as "fairly common in southern Equatoria" by Cave & Macdonald (1955), they are, like myself, now unable to find any specimens north of the Uganda border before the neighbourhood of Kassala is reached. (Cave *in litt.* tells me that the British Museum identified as "*capitalis*" a specimen he sent in 1935 from Wau which is north of the border, in the south-western Sudan, and far from the accepted range of that form, but in any case the specimen seems not now to be available.) Actually, Uganda birds do not agree with the type of *dimidiatus*, lent by the Turin Museum, two males in the British Museum and three lent by the Khartoum Museum from the Kassala neighbourhood. These all have much more and much deeper chestnut on the underparts and, less consistently, have brighter yellow, less greenish, backs. The Uganda birds themselves tend to get darker on the back as they go southwards, but the brightest series, from Wadelai, in the extreme north, can be matched by individuals from Entebbe and the base of Ruwenzori. In my opinion they can all be called *fischeri* Reichenowi (1887), though the type (lent by the Berlin Museum) from Mwanza on the south shore of Lake Tanganyika, is even greener above than the birds of southern Uganda. It may be noted that Reichenow (1904) correctly gives the differences between *dimidiatus* and *fischeri*, so it is surprising that Sclater (1930) should have synonymized the latter.

Of *P.m.capitalis* the British Museum possesses a specimen collected in 1909 on São Thiago, in the Cape Verde Islands, but, judging from the absence of the species from Bourne's list ('Ibis' 1955: 508–558), the species is not established there.

Ploceus dicrocephalus.

Mackworth-Praed & Grant (1955) attached to the *melanocephalus—dimidiatus—fischeri* group *dicrocephalus*, which ranges over south-eastern Abyssinia, Somalia and north-eastern Kenya. The male differs from those of *melanocephalus* subspp. in having a deep chestnut hind-collar instead of an indeterminate yellowish band. The female differs from those of the geographically nearest subspecies of *melancephalus*, namely *dimidiatus* and *fischeri*, only in having the breast washed with faint olive-yellow instead of ochreous. Thus there is no objection to treating *dicrocephalus* as conspecific with the other birds named either on plumage or on geographical range, since *dicrocephalus* is fully allopatric to the others.

This arrangement is, however, difficult to accept because *dicrocephalus* is isolated from the other birds in question by *jacksoni*, to which it is allopatric, and which it resembles as much as it resembles *dimidiatus* and *fischeri*. The male *jacksoni* itself is very like the male *dimidiatus*, differing only in having a slightly more extensive area of black on the back of the head and on the throat, accompanied by deeper and more extensive chestnut on the underparts; the female of *jacksoni* is, however, more yellower above, especially below, than that of *dimidiatus*.

Thus on plumage it would be equally reasonable to treat *dicrocephalus* as conspecific with *jacksoni* as with *fischeri* and *dimidiatus*. But they cannot all be treated as conspecific because *jacksoni* and *fischeri* overlap in the Entebbe—Kampala area. I would have been prepared to make *dicro cephalus* conspecific with *jacksoni*, but J. G. Williams (*in litt.*), one of the few people with personal knowledge of both in life, thinks that on differences in breeding habits they should be kept separate. Pending more precise information I therefore keep *dicrocephalus* as a monotypic species.

Ploceus jacksoni.

Chapin (1954) admits the subspecies *jucundus* of Friedmann, Mackworth-Praed & Grant (1955) regard it as synonymous with the nominate form. The traces of chestnut behind the black of the crown in *jucundus* occur also in some of the East African birds, but two males lent by the U.S. National Museum have the vent and under tail-coverts greener, less yellow, than a series from Kenya and Uganda, as Chapin found. *P.j. jucundus* seems a poor subspecies but provisionally I retain it.

Ploceus taeniopterus.

East of, and allopatric to, *P.m.capitalis* there is another, rather similar bird, *taeniopterus*, which occupies the Sudan as far east as the White Nile and has always been treated as a separate species. It differs from *melanocephalus* subspp. in lacking black on the head above the eyes, but according to Chapin (*in litt.*) it is very like these birds in life and its females and out-of-plumage males are indistinguishable. Hence if *taeniopterus* subspp. nowhere overlap *melanopterus* subspp. they could be treated as conspecific, especially as Chapin collected a specimen at Niangara, in the extreme north-east of the Belgian Congo, that he thinks somewhat intermediate between *m.duboisi* and *taeniopterus*.

It may be that the necessary allopatry between the two groups exists. *P.t.taeniopterus* has been traced south only to Lado (B.M.specimen), nearly 100 miles north of *m.fischeri* (Wadelai, as noted above). And although *taeniopterus* has been reported (on B.M. identification) from western Eritrea in the immediate neighbourhood of *m.dimidiatus* ('Ibis' 1957: 329–330), the specimen proves to be an out-of-plumage male, which might equally well be a *dimidiatus*. Thus, overlap has not been proved. Nevertheless, I prefer to err on the side of caution and treat *taeniopterus* as specifically distinct from *melanocephalus*, until we know something of what happens in their presumed meeting-zone near the western and south-western border of the Sudan.

Ploceus temporalis.

As noted elsewhere, provisionally I regard this as conspecific with *capensis* in view of the close resemblances in plumage, although the beak of *temporalis* is markedly shorter in proportion. The female of *temporalis* has not been described but thanks to a description by Chapin, *in litt.*, and the subsequent loan of a specimen, it can be said that in plumage it differs from the female of *capensis* only in having a little less yellow pigment above and below. In both birds the beak is pale brown but in *temporalis* it is much shorter.

To be continued.

The Dusky Lark *Mirafra nigricans* (Sundevall)

by Mr. C. W. Benson

Received 31st March, 1959

The notes by Winterbottom, "Ostrich", 1957: 240–1, and 1958: 88, have prompted me to investigate further the status of this lark, especially the evidence of breeding in the northern part of its range, which he suggests can only be occasional. To this end, I have examined twenty specimens in the British Museum, and thanks to Mr. R. H. N. Smithers and Miss Mary Paterson have also had the loan of some thirty specimens in the National Museum, Bulawayo, and to Dr. H. Schouteden, of twenty in the Congo Museum, Tervuren.

Evidence of breeding in the northern part of the range, which for the present purpose may be taken as the area north of the Zambesi, is as follows. In the British Museum there is a female collected by Lynes near Dilolo, southern Belgian Congo, 6th September, and labelled ''soon to breed'' (this was duly recorded by Lynes, Rev. Zool. Bot. Afr. 31, 1938: 74). In the Northern Province of Northern Rhodesia, as recorded in ''Ibis'', 1956: 601, I collected two males near Fwaka, 11–12th August, and four near Kawambwa, 1st September. All showed gonad activity, the testes averaging about 8 x 5 mm. In the latter locality, moreover, an aerial song, with rapidly fluttered wings was observed. Less conclusive evidence is forthcoming from immature specimens, perhaps fully grown, though it is unlikely that they had moved far from the site of breeding. These have the dark coloured parts of the plumage brownish rather than blackish, with a tendency to isabelline marginations, especially in the wings, while the white of the underside is somewhat isabelline in tone, and the markings on the chest are less heavy than in adults. There are the following such specimens:— (*a*) British Museum: one, Luangwa Valley, 16. 12. 05 (Neave); one, Zambesi, two, Kafue, 26. 12. 98 (Boyd Alexander) (from ''Ibis'', 1899: 653–4 it is clear that these three were all collected on the left bank of the Zambesi, near its confluence with the Kafue). (*b*) National Museum, Bulawayo: Kasama, 30. 11. 54. (*c*) Congo Museum, Tervuren: Kasaji, southern Congo, 13. 10. 50 (two) and 26. 10. 50. Verheyen, ''Exploration du Parc National de l'Upemba'', 1953: 424, describes such a specimen collected at Kilwezi, 18th August. Incidentally, there is another immature specimen in the British Museum, collected by Mrs. B. P. Hall near Panda Matenga, north-eastern Bechuanaland, 25th November, and discussed by her in ''Ostrich'', 1956: 103.

Considering material apparently adult, northern specimens tend to have the markings on the chest heavier than in southern. The difference is not such that I am prepared to designate the difference formally by creating a new subspecific name. Nevertheless there is this distinct tendency. In the National Museum, Bulawayo, six specimens from the Northern Province of Northern Rhodesia have the markings decidedly heavier than in three from the Okahandja River, South-West Africa (February), two from Nata, Bechuanaland (January, February), and two from Francistown (January). Fifteen specimens from Southern Rhodesia (January, one; February, two; March, one; April, five; May, four; July, one; November, one) are closest to the Bechuanaland and South-West African specimens, the chest markings being relatively scanty. On the other hand, specimens from the south of Northern Rhodesia are on the whole closest to those from further north. This certainly applies to four out of five from Livingstone (all May), though the fifth is closer to more southern material. Of two from Mazabuka (both April), one is more like southern material, the other northern. One each from Chilanga, Mpika and Bulaya (all May) have the chest decidedly heavily marked.

Of material apparently adult in the British Museum and the Congo Museum, as might be expected, practically all the specimens examined from the Belgian Congo are in the latter museum, while practically all the remainder are in the former. Three specimens from Mpanda and Kigoma, western Tanganyika Territory (May, June), and nineteen from the southern Belgian Congo (mostly from Kasaji, all May—October) have on the whole the chest markings heavy, especially those from Tanganyika, and this applies likewise to one from the Tabora district, Tanganyika (May), loaned from the Coryndon Museum by Mr. J. G. Williams. But the markings are relatively light in three from near Kamanjab, Damaraland (April), one from Ngamiland (April), and one from Rustenburg, Transvaal (January). Four from Livingstone, Mazabuka and Mongu, Northern Rhodesia (all May) are more or less intermediate. But in addition there are the following specimens which are rather markedly exceptional:—(*a*) Chest markings heavy: one collected by Bradshaw, merely labelled "Zambesi", but probably from the Makalaka country (see "Hist. Collections in Brit. Mus." 2, 1906: 317), which is in Bechuanaland, west of Bulawayo. (*c*) Chest markings light: one from Leopoldville, Belgian Congo, 18. 1. 44, and one from Fort Johnston, Nyasaland, 23. 5. 36.

Wing-measurements (in millimetres) do not suggest any geographical variation in size:—

South-West Africa	2♂	116, 123
	3♀	108, 109, 112
	1 sex?	109
Transvaal	1♂	118
Bechuanaland	2♂	112, 122
	2♀	114, 115
	1 sex?	119
Southern Rhodesia	4♂	116–120
	9♀	110–115
Northern Rhodesia	8♂	115–121
	13♀	110–116 (one 120)
Nyasaland	1♀	114
Belgian Congo	10♂	117–125 (one each 112, 113, 114)
	9♀	111–117 (one each 120, 121)
	3 sex?	108, 112, 113
Tanganyika Territory	3♂	119, 119, 125
	1♀	116

Males seem rather larger than females. There appears to have been some mis-sexing, especially in the Congo series.

To summarise, there is a fair amount of evidence that the Dusky Lark does breed in the northern part of its range as well as the southern (the evidence for which is quoted by Winterbottom), while the fact that northern birds are on the whole more heavily marked on the chest does not point to any extensive northward migration of southern bred birds in the non-breeding season. It may also be noted that except for the Leopoldville specimen there are no records above from north of the Zambesi during the period January—March. Nor do Benson & White, "Check List of the Birds of Northern Rhodesia", 1957, give any records for this period, except for late March. Apparently there is a migration, but this of course requires further investigation. Ananalogous case may be that of the Capped Wheatear *Oenanthe pileata livingstonii* (Tristram), of which there are no records from Northern Rhodesia during December—March, see Benson & White, *op .cit.*

I thank Mrs. B. P. Hall for commenting on the draft of this note.

Note:— Mr. M. P. Stuart Irwin, who agrees with my comments on the specimens in the National Museum, Bulawayo, that the northern ones tend to have heavier chest markings, informs me that there are a further six specimens therein with decidedly heavy markings. These were collected near the Sebungwe River, in the Zambesi Valley in Southern Rhodesia, at 17°45′ S., 27°12′ E., in early May, and were definitely not seen by me.

White, "Bull. Brit. Orn. Cl." 79, 1959: 54, may well be correct in suggesting that *M.nigricans* is nomadic rather than migratory.

Some Remarks on *Prinia flavicans* and its Allies

by Mr. Michael P. Stuart Irwin

Received 23rd March, 1959

(*a*) The Status of *Prinia flavicans nubilosa* Clancey.

Clancey *Durban Museum Novitates* V, (4) 1957: 46 described as new *Prinia flavicans nubilosa* with type locality Kendal, near Witbank, Transvaal, as differing from nominate *P. flavicans* in being darker brown on the mantle and the underparts more deeply tinged with sulphurous yellow, flanks strongly washed with rusty buff. The type series were based on fresh plumaged birds in non-breeding dress.

When describing this new race, the author drew attention to the existence of the name *P.* (*Drymoica*) *ortleppi* Tristram *Ibis*, 1869, 207., a seldom quoted synonym, with type locality Colesberg, northern Cape Province. It was assumed by Clancey that material of *P. flavicans* from Colesberg would have shown intergradation between *P.f.nubilosa* and *P.f.flavicans*, but unfortunately this author was unable to obtain topotypical material of *P.f.ortleppi* before describing *nubilosa.* I have not seen the Type of *ortleppi* itself, which would appear to be in Liverpool with Tristram's Collections, but through the courtesy of Dr. J. M. Winterbottom of the South African Museum, Cape Town, I have been able to examine a non-breeding, undated and unsexed specimen collected by Ortlepp from the type locality. Though badly foxed through age, especially on the mantle, this specimen agrees with the Type and paratypical series of *P.f.nubilosa* in being darker above on the mantle and in having the flanks rusty buff, also in the unusually dark tail and broader rectrices.

Dr. J. M. Winterbottom and Mrs. B. P. Hall inform me (*in litt.*) that they have independently arrived at the same conclusion, that *P.f.nubilosa* is the same as *P.f. ortleppi.* It is therefore considered that *P.f.nubilosa* Clancey 1957 should be placed in the synonymy of *P.f. ortleppi* Tristram 1869.

(*b*) The status of *Prinia ansorgei* Sclater.

Prinia ansorgei Sclater *Bull. B.O.C.* 48, 1927: 18, was described from a series of fifteen specimens collected by Ansorge at Huxe, Catumbella, and near Benguella Town in September and October. To date its status as a species has never been disputed, but Mrs. B. P. Hall, who has collected some specimens of *P. ansorgei*, drew my attention to their obvious close relationship to *P. flavicans*, and suggested that they were conspecific.

Sclater, in describing *P. ansorgei*, for some reason failed to compare it with *P. flavicans*. Traylor, of the Chicago Natural History Museum, remarks (*in litt.*) that there is very little difference between *ansorgei* from Angola and *P. flavicans* from Damaraland, and this is borne out by the material in the National Museum of Southern Rhodesia, Bulawayo; Traylor remarks that *P. ansorgei* is more grey above, more clearly white below, and with breast band not as strongly marked. Reichenow, *Die Vogel Afrikas* 3, 1904–05, 593, lists *P. flavicans* from Humpata which is within the range of *P. ansorgei*, not seemingly having seen fit to distinguish it from that species. Traylor also informs me that a male from Humpata in the Chicago Natural History Museum has the breast band as heavily marked as in *P. flavicans* from Damaraland and is thus intermediate. Most South West African birds are clearly referable to *P. flavicans;* however, fresh non-breeding birds from the Kaokoveld, collected by the Bernard Carp, 1951, Expedition, show a definite approach to *P. ansorgei* in being very pale on the underparts, lacking the normal yellow suffusion, and with the flanks quite immaculate.

Macdonald and Hall, *Annals Transvaal Museum* 23, 1, 1957: 29 remark that this series match others in comparable plumage from other parts of the range of *P. flavicans;* they are, however, in fresh plumage, having been collected in June and July, and are clearly distinguishable from a large series from the Kalahari and Southern Rhodesia in the loss of yellow.

Biologically, the range of *P. ansorgei* is determined by the extension of the south west arid thorn scrub into coastal Angola, and it would seem certain that the range of *ansorgei* and *flavicans* was continuous. *P. ansorgei* represents an intensification of the differences distinguishing Kaokoveld and northern South West African birds from those further to the south and east.

For the reasons given above, it is proposed that *P. ansorgei* be treated as conspecific with *P. flavicans*, and in future should be known as *P. f. ansorgei.*

(*c*) The relationship of *Prinia flavicans bihe* Boulton and Vincent.

Prinia flavicans bihe Boulton and Vincent *Bull, B.O.C.* 57, 1936: 7 of the central plateau of Angola, differs rather strikingly from the other races of *P. flavicans* in breeding plumage, in being dark sooty brown on the mantle and tail, with underparts yellow and flanks tinged olivaceous, and pectoral band darker.

Though very few specimens are available, it would seem to be restricted to the Angolan plateau, extending eastwards to extreme western Northern Rhodesia at Balovale.

In contrast to other forms of *P. flavicans*, *bihe* is a bird of moister savannah country and not arid thorn bush. Its range would appear to be isolated geographically from the thorn-bush specific races, and as it is part of a different faunal assemblage its relationship requires investigation in the field. It may, or may not, be conspecific with *P. flavicans*.

For the loan of material in connection with this paper, I have to acknowledge the assistance of Dr. J. M. Winterbottom of the South African Museum, Cape Town, and to Mr. P. A. Clancey, Director of the Durban Museum and Art Gallery, also to the authorities of the British Museum (Natural History), and the Chicago Natural History Museum for loan of material of *P.f.bihe* and *P.f.ansorgei* respectively.

My thanks are also due to Melvin Traylor of the Chicago Natural History Museum for his help and comments, and to Mrs. B. P. Hall of the British Museum, both of whom have read these notes through in draft.

Finally, to the Director of the National Museum of Southern Rhodesia, for the usual facilities for working on the collections.

5 OCT 1959

BRITISH MUSEUM

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 3/– each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

20th October, 17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

Bird Room

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

Edited by
Dr. JEFFERY HARRISON

9 NOV 1959
PURCHASED

Volume 79
No. 8

November
1959

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

Volume 79

Number 8

Published: 2nd November, 1959

- 9 NOV 1959

PURCHASED

The five hundred and seventy-fifth meeting of the Club was held at the Rembrandt Hotel, S.W.7., on Tuesday, 20th October, 1959, following a dinner at 6.30 p.m.

Chairman: CAPTAIN C. R. S. PITMAN

Members present, 19; Guests, 4; Total, 23.

Mr. C. L. Coles, of the I.C.I. Game Farm Research Station at Fordingbridge, gave a talk on the history and principals of game conservation and showed a film on the rearing of pheasants. This was followed by a discussion on the relative harmfulness to game of some of the predatory birds and the dangers of extensive use of chemicals on farms.

An aberrant Red-legged Partridge from Gloucestershire

by DR. J. S. ASH

Received 3rd March, 1959

An aberrant Red-legged Partridge, *Alectoris rufa* (Linn.), was shot at Tewkesbury, Glos., on 18th October, 1958 and presented to me by W. J. Healing, Esqre. It was an adult (i.e. at least 16 months old), and proved on dissection to be a female weighing 380 gms.

It differs from a typical bird in the following details:—
Whole of top of head: black flecked with white (the individual feathers are dirty-white with black tips); some buffish fringes to feathers of nape. Ear coverts: black. Hind-neck: dove-grey as breast, but feathers fringed with buffish. Upper back: all feathers have creamy-white bases followed by bands of dove-grey, pale buff, black narrowly, then rufous; those of the mid-back had further narrow black and buff bands at the tips. Lower back: barred rufous and buff; rump and upper tail coverts deep buff, some of the latter broadly tipped rufous. Rectrices: paler rufous than typical birds, and

all alike. An inconspicuous dark line separates the off-white throat from the extensive dove-grey of the breast, and there is a complete absence of black and white streaking on the breast and sides of neck and breast. Sides and flanks: the feathers have only very pale grey centres (on some only), edged with dark rufous and black (narrower and darker than on typical birds). The rest of the underparts are buff, paler than in normal birds, except under-tail coverts which are deep buff barred with rufous.

Secondaries: broadly edged buff with rufous and blackish-brown centres, the inner ones also showing grey-blue in centres. Wing-coverts: all are mostly buff on outer webs, and centred with rufous and blackish on inner; some of them showing traces of blue-grey.

Generally speaking the upper parts excluding the head region show a very similar distribution of patterning and colour distribution to the underparts: there is a complete absence of the uniform appearance of the underparts of typical birds. The skin is now preserved in the collection of the Game Research Station at Fordingbridge, Hants.

No description has been found in the literature which agrees with this specimen, although the search has been far from exhaustive. The Handbook of British Birds mentions briefly three varieties, including one with rufous and buff upperparts which has occurred on a few occasions. This may resemble the present bird. Ogilvie-Grant (1895) refers under the allied *Caccabis* (= *Alectoris*) *saxatilis* to three examples from Switzerland with black heads, which have been named var. *melanocephalus*. Parker (1950) refers to four varieties in the British Museum collection, but none would appear to agree with the present specimen.

It would be interesting to have further information on the distribution and occurrences of this type of aberration. Their genetics are an intriguing problem, and this present variety shows some parallels with the rufous "*montana*" variant in *Perdix perdix* (Linn.).

It should be added that this bird showed pathological lesions of the liver. These are reported on separately by Dr. J. M. Harrison as follows:—

> "The liver of this bird was kindly sent to me by Dr. Ash and sections were prepared through the kindness of Dr. Keith Randall, Consulting Pathologist to Sevenoaks Hospital. On macroscopical examination, the organ was studded with greyish-yellow nodular lesions, which on histological examination showed typical giant-cell systems and central necrosis, in the sections stained with Haematoxylin and Eosine. Those stained by the Ziehl-Neelsen technique showed colonies of organisms morphologically indistinguishable from *Mycobacterium tuberculosis avium*. As no unfixed tissue was received, confirmation by culture was not possible. It is not considered that this condition was relevant to the aberration described by Dr. Ash."

Acknowledgements.

I am very grateful to Mr. W. J. Healing who made available the specimen, and to Dr. J. M. Harrison for his gift of some excellent colour transparencies of the bird. These photographs are available on loan to anyone wishing to study them.

References:

Ogilvie-Grant, W. R. (1895). *A Hand-Book to the Game Birds*. London. 1895.
Parker, Eric (1950). *Game Birds, Beasts and Fishes*. London. 1950.
Witherby, H. F., et al. *The Handbook of British Birds*, Vol. V. London. 1941.

Notes on some Grey-headed Sparrows from Kenya Colony

by Mr. P. A. Clancey

Received 26th February, 1959

In observations on African ploceids destined for inclusion in their contribution to the continuation of Peters' *Check-List of Birds of the World*, White and Moreau, *Bull. B.O.C.*, vol. 78, 8, 1958, pp. 140–145, make *Passer gongonensis* (Oustalet) conspecific with *Passer griseus* (Vieillot), placing all the populations resident in Kenya Colony, with the sole exception of those of Kavirondo on the eastern shores of Lake Victoria, in a single subspecies, namely, *P.g.gongonensis*, described in 1890 from Gongoni, near Mombasa, coastal Kenya Colony. In following this line of action they dismiss the calculated findings of Mackworth-Praed and Grant, *Birds of Eastern and North Eastern Africa*, vol.ii, 1955, pp. 878–880, and Benson, *Bull.B.O.C.*, vol. 76, 3, 1956, p. 42, who record unequivocally the occurrence of small-billed, dark backed and apparently specifically distinct birds (*Passer* "*griseus*" *suahelicus* Reichenow, 1904: Bussissi, Mwanza, northern Tanganyika Territory) on the Loita Plains of south-western Kenya Colony.

During the course of a two months' collecting trip to Kenya Colony in March and April, 1958, I collected Grey-headed Sparrows on many occasions, and the series obtained, which is now in the collection of the Durban Museum, has been studied in close detail in the light of White's and Moreau's recent contribution. The material which I obtained in the Rift Valley-Eastern Highlands area of Kenya Colony shows conclusively that three perfectly distinct forms of Grey-headed Sparrows occur in the area concerned, two of them sympatrically.

In the gardens of the European houses attached to the factory of the Magadi Soda Company at Lake Magadi, Rift Valley (altitude *c.* 2,000 ft. a.s.l.), *Passer griseus ugandae* Reichenow, 1904: Uganda (treated as a synonym of *P.g.griseus* by White and Moreau), was obtained, while on 3rd March among native dwellings at the base of the Lebetero Hills, about 20 miles due west of Magadi but still on the floor of the Rift (altitude about 2,500 ft. a.s.l.), I obtained two male specimens of *P.suahelicus*, while many others were seen. Later in the same month while staying with the Hon. Arthur Cole on his property at Lake Elmenteita, also in the Rift Valley, I found *P. suahelicus* to be common in and around the farm buildings, and two females taken on 22nd and 23rd March agree exactly with the Lebetero Hills birds collected earlier. These observations rather negative the generally held belief that the range of *P.g. ugandae* is dependent on the fact that this form is largely commensal on human settlement, while those of its allies are supposedly not. The Lebetero Hills lie immediately to the east of the Loita Plains in south-western Kenya Colony, from which latter locality *P.suahelicus* has already been recorded by Mackworth-Praed and Grant and Benson, *loc.cit.* There is no doubt that the specimens before me have been accurately determined, as they agree with Reichenow's original description and the diagnostic characters of the form as defined by the above mentioned authorities.

In the Rift Valley I did not find the Parrot-billed Sparrow *P.gongonensis* though it assuredly occurs, because Jackson, *Birds of Kenya Colony and the Uganda Protectorate*, vol.iii, 1938, p. 1391, records it from Baringo in what is actually a continuation of the Rift. On the highland plateau to the east of the Rift only *P.gongonensis* was obtained (Lion Rocks, Yatta (pres. J. G. Williams); Ngong). This dark, heavy-billed form was also taken at Kibwezi and at Kilifi on the coast, where it was noted that its call was quite unlike that of either *P.g.ugandae* or *P.suahelicus*.

The sympatric status of *P.g.ugandae* and *P.suahelicus* in parts of the Rift Valley is not unique, judging by the statement of Benson, *loc.cit.*, who records that Mr. D. Vesey-FitzGerald has also collected them both in the same general area in the neighbourhood of Lake Rukwa, south-western Tanganyika Territory. While it is perfectly conceivable that in all the vastness of Africa only a single polytypic species is involved, some of the component forms of which behave as good subspecies in some areas of their zones of overlap and as discrete species in others, the question of the existence of sibling species in this group needs to be thoroughly investigated. The interdigitating and overlapping of the ranges of *P.g. ugandae*, *P.suahelicus* and *P.gongonensis* in the highland area of Kenya Colony suggests that there is much merit in the arrangement adopted by Mackworth-Praed and Grant, *loc.cit.*, and that the single polytypic species of White and Moreau is a highly unsatisfactory taxonomic unit. The strange relationship between the forms *P.g.ugandae* and *Passer diffusus loangwae* Benson, 1956, in the eastern half of Northern Rhodesia, and the highly confused status of the populations in Angola, only tend to heighten the belief that we are dealing with more than races of a single species. It is to be regretted that a formal arrangement of the African Grey-headed Sparrows has to be enshrined in the continuation of Peters' *Check-List* at the present juncture.

Some Comments on Autumn Migration in Eastern Iraq

by BRYAN L. SAGE

Received 12th June, 1959

This paper is intended as a general discussion of certain aspects of autumn migration observed in eastern Iraq during 1958. A detailed account of the migratory species seen from June—September 1958 has already been published (Sage 1958).

The observations discussed herein were made in the vicinity of Khanaqin about 90 miles north-east of Baghdad. The town is situated by the Alwand River in the desert foothills of the Jebel Hamrin Mountains, and is only four miles or so from the Persian border at its nearest point. To the north, north-east and east the horizon is taken up by the high mountains of Kurdistan and Persia. The latter are the Pusht-i-ku Mountains rising to about 4,000 ft. and beyond them are the Zagros Mountains which rise to more than twice this height. Khanaqin itself is about 600ft. above mean sea level. The Alwand Riuer rises in the Persian Mountains and flowing westwards through Khanaqin eventually unites with the Diala River, which is itself a major tributary of the River Tigris.

My observations suggest that the Alwand River, and doubtless the other rivers that flow throughout the hot season, are important routes for certain migratory species coming from Persia and beyond. For instance every evening during the first three weeks of September there was a constant movement of Turtle Doves *Streptopelia turtur* L. down the valley of the Alwand, on 13th September a minimum of 850 passed in fifteen minutes all going in a general westerly direction. Observations made west of Khanaqin showed that these birds eventually left the course of the river and continued to the south-west. On 3rd September there was a fairly strong S.W. wind; great numbers of Sand Martins *Riparia riparia* (L.) were coming down the river from the east and veering to south-west. Movements of this species continued throughout September.

The primary direction of observed migration at Khanaqin was from between north and east to the south and south-west. This line of flight would take migrants across the plain of Iraq into the Arabian deserts and thereafter to the Red Sea area. There can be no reasonable doubt that these migrants must cross the deserts of Arabia. Major R. E. Cheesman (*antea* xlv: 26–27) expressed the opinion that the great stream of Asia-Africa migration followed a straight line across the great Arabian deserts, and Bourne (1959) found evidence that many species take a direct route across the desert. So far as the origin of migrants observed at Khanaqin is concerned it is evident that most of them come from Persia, the Caucasus, Russia, and beyond. The few ringing recoveries support this; individuals of *Ardea cinerea* L. and *Egretta alba* (L.) collected in south and north Iraq respectively were wearing Moscow rings (Allouse 1958). Dr. James M. Harrison (1959) records a Little Egret *Egretta garzetta* (L.) that had been ringed on the Volga Delta at Astrakhan and recovered at Habbaniya.

The first autumn migrants—Marsh Sandpipers *Tringa stagnatilis* (Bechstein) and Green Sandpipers *Tringa ocrophus* L.—appeared in late June when the shade temperature was in the order of 125 deg. F. Migration was still continuing when I left the country at the end of October. Movements of birds of prey and White Storks *Ciconia ciconia* (L.) continued during the hottest part of the day, whilst Hirundines and Turtle Doves moved mainly in the evenings. Many of the smaller species such as Wryneck *Jynx torquilla* L., Redstart *Phoenicurus phoenicurus* (L.), Bluethroat *Luscinia suecica* (L.), Willow Warbler *Phylloscopus trochilus* (L.), Chiffchaff *Phylloscopus collybitus* (Vieillot), Spotted Flycatcher *Muscicapa striata* (Pallas), and shrikes *Lanius* sp. appeared to move during the hours of darkness, as frequently I found that birds that had been in the garden at sunset had gone by the early morning; and on the other hand there were often many warblers, shrikes and redstarts present in the early morning that had not been there the previous evening. Bourne (1959) records small passerines leaving Mafraq in north Jordan soon after sunset. During the night of 9th September a large number of Common Cranes *Grus grus* (L.) passed over, their trumpeting being extremely audible.

The only occasion on which I observed birds to be greatly affected by the heat was on 22nd August. On this date I was at Naft Khaneh on the Persian border 22 miles S.S.E. of Khanaqin. The shade temperature was 115 deg. F. and there was a furnace-hot wind blowing strongly from the south-west which gave rise to a good deal of dust. A small walled garden with eucalyptus and other trees and shrubs afforded shelter to a variety of species, including warblers and several *Oenanthe* sp.; sitting in a small patch of shade under one bush were three Hoopoes *Upupa epops* L., two

Red-backed Shrikes *Lanius collurio collurio* L. and a Lesser Grey Shrike *Lanius minor* Gmelin, all had their beaks open and appeared to be in considerable discomfort. A Spectacled Warbler *Sylvia conspicillata* Temminck which was also present is only the second to be recorded in Iraq, the first was recorded by Meinertzhagen (1924).

As an illustration of what could be seen on a day of heavy movements in good conditions I quote an extract from my diary for 10th September:—

> "At 1030 hours this morning there was a steady stream of harriers passing low from N.E. to S.W. and all around the sky was full of Black Kites *Milvus migrans* (Boddaert). At 1045 hours a loose flock of some 300 White Storks came over from the north and entered a thermal current, they were accompanied by three Black Kites and slowly spiralled to a great height, an entrancing sight against the clear blue of the sky. Above the storks at the start of their ascent were a number of Egyptain Vultures *Neophron percnopterus* (L.), two Griffon Vultures *Gyps fulvus* (Hablizl.), six Steppe Buzzards *Buteo buteo vulpinus* (Gloger) and an Imperial Eagle *Aquila heliaca* Savigny; even higher so as to be invisible to the naked eye were perhaps 30 or more eagles".

Bird of Prey Migration

About twelve species of birds of prey were recorded passing through the Khanaqin area on migration. The most numerous species was the Black Kite which first appeared on 14th August and thereafter became more and more numerous. The occurrence of Imperial Eagle and Steppe Buzzard has already been mentioned, about 20 of the latter were recorded on 9th October. Long-legged Buzzards *Buteo rufinus* (Cretzschmar) also appeared for the first time in early October. Egyptian and Griffon Vultures, whilst breeding somewhere in the area, were far more numerous during August and September. On 12th September there were 14 of the former species in a compact bunch circling and drifting to the south-west.

From late August onwards there was a constant movement of harriers from the north to the south-west, generally they flew low and on a fairly direct course and could be watched disappearing into the distance. Hen Harrier *Circus cyaneus* (L.), Pallid Harrier *C.macrourus* (Gmelin), and Montagu's Harrier *C.pygargus* (L.) were all in evidence during this period.

Perhaps the most interesting record of all was that of the Lesser Kestrels *Falco naumanni* Fleischer. On the evening of 24th September a group of eight flew over to the south, they were followed shortly afterwards by no less than 60 more birds which arrived from the E.N.E., these were accompanied by a dozen Kestrels *Falco tinnunculus* L. After hawking for some time over a date palm garden the whole concourse eventually roosted for the night in a tall eucalyptus tree. The Lesser Kestrels departed the next morning, but the Kestrels remained behind. Meinertzhagen (1954) states "The migration of this bird from Asia to Africa is obscure and the solution of passage probably is to be found in Arabia". There are only two previous records of Lesser Kestrels in Iraq in the autumn, October 1917 and October 1943.

Meinertzhagen (1954) has suggested that the bird of prey movements over the Bosphorus and through the Suez area are one and the same. It seems to me that the movements that I witnessed in Iraq must also be part of this great migration, the birds involved being of more easterly origin than those crossing the Bosphorus. The line of flight from Khanaqin to the south-west, if maintained, would take these birds across Arabia or perhaps to Sinai.

References:

Allouse, B. E. (1958) Two Ringed Birds Shot in Iraq. *Iraq. Nat. Hist. Mus. Publication No.* 14: 20.

Bourne, W. R. P. (1959) Notes on Autumn Migration in the Middle East. *Ibis* 101: 170–176.

Harrison, Dr. James M. (1959) Notes on a Collection of Birds made in Iraq by Flight Lieutentant David L. Harrison. *Bull. Brit. Orn. Cl.* 79: 9–13.

Meinertzhagen, Col. R. (1924) Notes on a small collection of Birds made in Iraq in the winter of 1922–23. *Ibis* 6: 601–625.

Meinertzhagen, Col. R. (1954) *Birds of Arabia.*

Sage, Bryan L. (1958) Field Notes on Autumn Migration in the Khanaqin Area in 1958. *Iraq. Nat. Hist. Mus. Publication No.* 16: 33–48.

Evolutionary Significance of Certain Plumage Sequences in Northern Shoveler.

by DRS. JAMES M. HARRISON AND JEFFERY G. HARRISON

Received 15th May, 1959

In previous papers on variant characters of evolutionary significance in wildfowl, either with or without the influence of interspecific hybridisation, we have considered bridling and bimaculation of the face[1 2 3 4], the appearance of pale loral[5] and chin spots[6], partial or complete white neck rings[7 8 9] and barring or spotting of the breast[10 11].

Some years ago, we realised that a number of these features appear as transient characters in the very varied plumage sequences of the Northern Shoveler, *Anas clypeata* Linnaeus, particularly by the first year drakes as they gradually assume full plumage throughout autumn, winter and spring. We began therefore, collecting a series of specimens, which now numbers seventy four and which we feel is sufficient to warrant study. It is made up of 9 drakes in full plumage, 6 eclipse drakes, 10 ducks in full plumage, 2 eclipse ducks, 3 transition drakes from eclipse, 30 first year transition drakes, 3 immature drakes, 4 immature ducks and 7 ducklings.

The transient characters which we wish to consider are as follows, together with their incidence, although of course, this can only give an indication as represented by our series of skins. The true incidence can only be obtained by studying live birds at regular intervals to note the transient characters while they are present. The incidence of the various characters as found in the skins is however sufficiently high to show that they occur commonly and are not the result of mere chance resulting from a haphazard moult.

TRANSIENT CHARACTERS

(a) *White neck ring*	
1st year transition drakes	11 out of 30
(b) *Pale crescent of face*	
Eclipse drakes	5 out of 6
1st year transition drakes	12 out of 30
Adult ducks	4 out of 10
Eclipse duck	1 out of 2
Immature drakes	2 out of 3
Immature ducks	4 out of 4

(c) *Pale chin spot*			
1st year transition drakes			9 out of 30
(d) *Pale loral spot*			
Eclipse drakes			1 out of 6
Eclipse ducks			1 out of 2
Adult ducks			7 out of 10
Immature drakes			2 out of 3
Immature ducks			4 out of 4
(e) *Barring and spotting of lower breast*			
Adult drakes	Visible	6	out of 9
	Concealed	3	
	Absent	0	
1st Year Transition drakes	Visible	22	out of 26
	Concealed	4	
	Absent	0	
(f) *Dark crescents of upper breast*			
Transition drakes from eclipse			3 out of 3
1st Year Transition drakes			30 out of 30

We have selected four specimens to illustrate as many of these points as possible. No. 1 is a first year transition drake of 6th March 1959; No. 2 is the same of 2nd February, 1947; No. 3 is the same of 16th February, 1947 and No. 4 is an eclipse drake of 27th August, 1944. All were from Kent.

Before considering these characters in detail, it is necessary to note the position of Northern Shoveler in relation to other dabbling ducks. Delacour[12] in ''The Waterfowl of the World'' Volume II, has placed all the Shoveler species, together with the Cinnamon Teal, *Anas cyanoptera*, Blue-winged Teal, *Anas discors*, and Garganey, *Anas querquedula*, into a group of ''Blue-winged Ducks'', all being highly specialised with a distinct line of evolution within the genus *Anas*, but with affinities towards the Mallard, *Anas platyrhynchos*. The former genera of *Rhynchaspis* and *Spatula* for the Shoveler species are no longer upheld. Delacour's English terminology of ''Northern Shoveler'' seems so suitable, that we have decided to adopt it instead of ''Shoveler''.

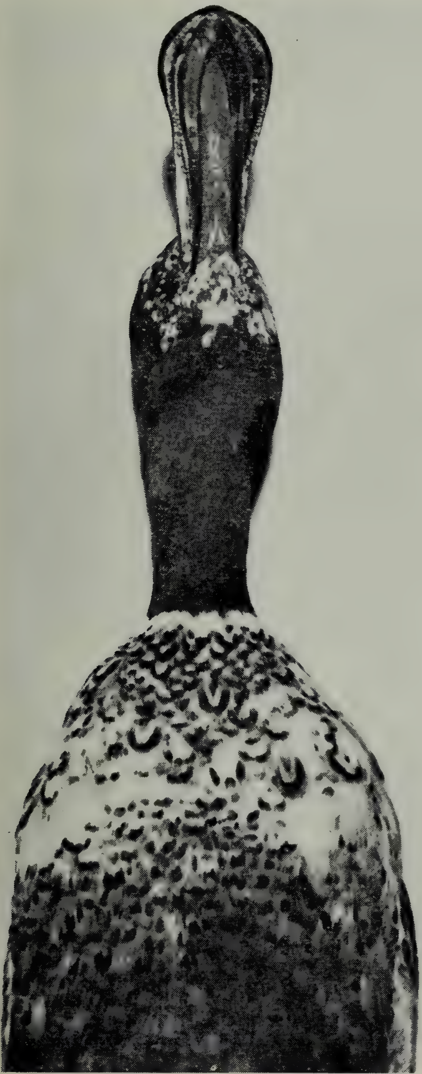
Neither the ''Practical Handbook of British Birds''[13] nor ''The Handbook of British Birds''[14] have any reference to the transient characters we are considering, but Delacour, writing under Northern Shoveler states ''All sorts of transition dresses are found. One is often seen that is strongly reminiscent of the Australasian Shovelers; the head is mixed with black and dirty white, the latter colour prevailing on the throat and on the face, suggesting a white crescent''. A bird in this stage of plumage is illustrated by Peter Scott in the same volume and another in ''The Wildfowl of the British Isles''.[15]

In this connection, Mayr, Linsley and Usinger[16] comment ''since the more primitive species or groups are likely to retain the most primitive characters, it is important to know where the most primitive forms are apt to be found. Here geographical distribution and habits aid greatly. New Zealand and Australia, and to a lesser degree South America, are great reservoirs of primitive types''.

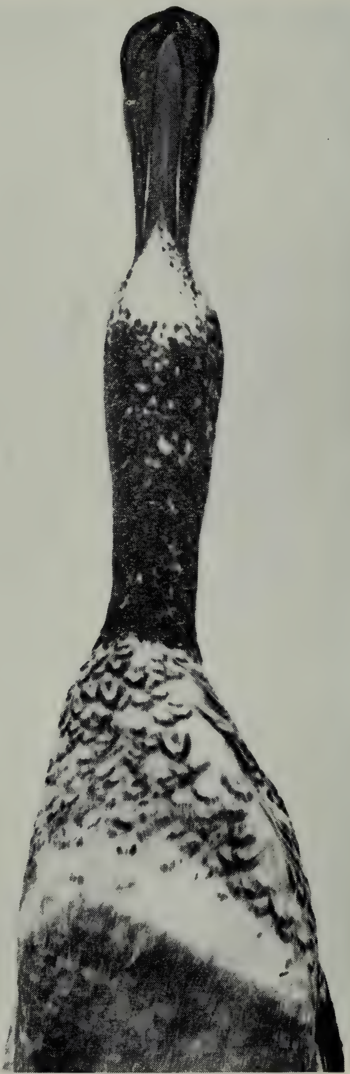
Peter Scott, writing to us on the subject of white neck spots in teal has realised the probable significance of these transient characters when he stated ''Incidently, the Pintail also has a white neck ring which shows at certain stages of the eclipse''. The full text of this interesting letter has already been published in the Bulletin.[8]

To deal now with each character in turn:—

(a) *White neck ring*. This is present to a variable degree in 11 out of 30 first year transition drakes. It is situated at the same point on the lower



No. 1. First year transition drake, 6.iii.1959, showing white neck ring, crescents of upper breasts, barring and spotting of lower breast.



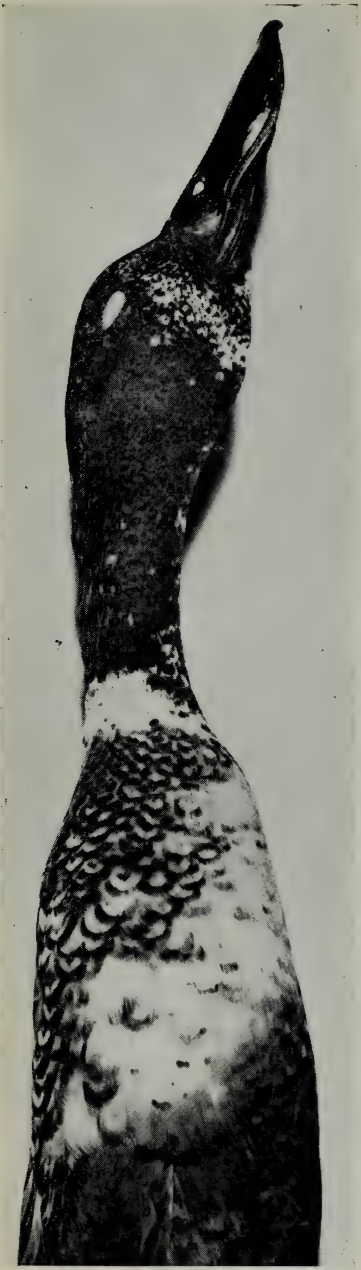
No. 2. First year transition drake, 2.ii.1947, showing pale chin spot, crescents of upper breast and apparent absence of spotting on lower breast.

neck as is the white neck ring of the drake Mallard, and in well defined examples is equally extensive, encircling the neck, but not quite meeting on the nape. This is illustrated by the two examples, Nos. 1 and 3 in the photographs.

According to Delacour, the evidence for supposing that the ''Blue-winged Ducks'' show an affinity to the Mallard and near relatives is that their ducklings are closely similar and that those of the Shovelers have normally shaped bills on hatching, while the adults swim and walk like Mallard. In our opinion, the presence of the white neck ring in Northern Shoveler is further evidence of this affinity.

(b) *Pale crescent of face.* We believe that this is one of the most primitive characters of Northern Shovelers, by virtue of the fact that it is found in all plumages except the adult drake in full plumage. It is best seen in first year transition drakes. In our series 12 out of 30 show it to a variable degree and it is illustrated in photograph No. 3. It is situated from above and in front of the eyes and extends downwards to the malar region. It is formed as the blue-green feathers of the head in full plumage are grown, the crescent being the remaining pale brown feathers of the immature plumage which are the last to be replaced. In its early stages, this plumage bears a striking resemblance to the New Zealand race of the Australasian Shoveler, *Anas rhynchotis*, and as the crescent becomes more or less speckled with dark feathers as full plumage develops, the appearance becomes more suggestive of the Australian race.

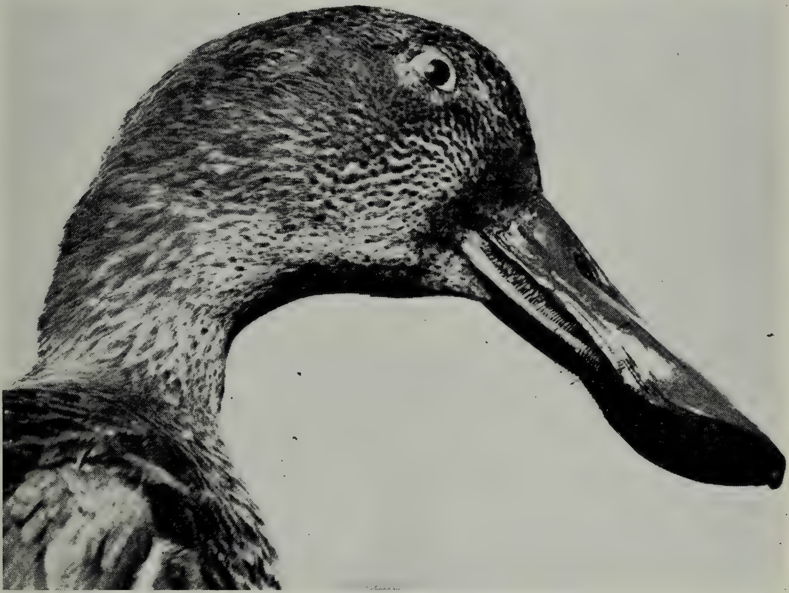
Five of the six eclipse drakes show a similar pale crescent, which is also illustrated in photograph No. 4, as does one eclipse duck out of two, four out of ten adult ducks, all four immature ducks and two out of the three immature drakes. The degree of crescent formation is very variable; often minimal in the ducks and immatures, but is rendered more obvious by an interruption in the dark line



No. 3. First year transition drake, 16.ii.1947, showing pale crescent of face and white neck ring.

running from the upper mandible to the eye. In the eclipse drake, it is most easily seen in that type which develops a dark smokey coloured head and neck, except for the crescent, which is pale straw-coloured, spotted with sepia. This is the type we have illustrated.

Anas rhynchotis, the Australasian Shoveler, is closely related to the Northern Shoveler, as evidenced particularly by display and behaviour and it also shows a remarkable similarity in head pattern and colour to the Blue-winged Teal, so that the presence of the pale facial crescent in Northern Shoveler is further evidence of the affinities of these species. It has however, a still greater significance when considered in conjunction with bridling and bimaculation of the face. This has already been described in certain hybrids, notably a Teal X Shoveler[2], Wigeon X Shoveler[4], Pintail X Teal[17] and the so-called ''Bimaculated Duck''[18]—a Mallard X Teal. In all of these, the cheeks are pale-coloured and are sharply divided by a vertical line running downwards and slightly backwards below the eye, to give the appearance strongly suggestive of the drake Baikal Teal, *Anas formosa* Georgi.



No. 4. Eclipse drake, 27.viii,1944, showing pale crescent of face.

Such hybrids provide evidence that these remarkable facial patterns are ancestral in character, arising by gene recombination as the result of hybridisation, although we have recorded bridling, in which the cheeks are divided into two by a similar line of different colour in the European Green-winged Teal, *Anas crecca crecca* Linnaeus, and in duck Baikal Teal variants. We now think that the pale facial crescent of the Australasian Shovelers and the Northern Shoveler is homologous with the anterior half of the bimaculation of these hybrids and is therefore ancestral and of evolutionary significance.

(c) *Pale chin spot.* A pale chin spot in first year transition drakes, formed in the same way as the pale facial crescent, is present in 9 out of 30. This is often well marked, as in photograph No. 2. At first it may appear to have little significance, but a white chin spot is frequently found in a number of species of diving duck, while a drake Mallard showing this variation was exhibited at the B.O.U. Centenary Conference and will be dealt with more fully in a forthcoming paper on that species. The presence of a pale chin spot as a transient character in Northern Shoveler should therefore be noted as a probable ancestral character.

(d) *Pale loral spot.* The presence of a pale loral spot is a character linking the dabbling duck with the perching duck (Brazilian Teal, *Amazonetta braziliensis*), the Goldeneye, *Bucephala clangula,* and the stiff-tails (White-backed Duck, *Thalassorius leuconotus*). In the dabbling duck, it is seen in its most highly developed form, like bridling, in the Baikal Teal, but is also present in such species as the European Green-winged Teal, Garganey and Mallard. In the latter, it may become a prominent feature in certain types of albinism.

A careful examination of our series of Northern Shoveler shows that this species also possesses a pale loral spot in all plumages except the adult drake. It is not constant and the incidences have already been given. It is never a prominent feature, in that the ground colour is the same buff brown as the ground colour of the rest of the cheeks, but is made apparent by the absence of small sepia spots, such as are found on the cheeks elsewhere.

(e) *Barring and spotting of the lower breast.* We have come to regard barring and spotting of the lower breast as a character of considerable significance in other duck. Thus in the Mallard there is a morphic cline of this character, reaching its peak in Greenland, where all have heavily spotted breasts[19]. Variants of the European Wigeon sometimes have heavily spotted or barred breasts and the whole of the underparts of transition drake Teal are occasionally completely spotted.

There is some difference of opinion in the literature on this subject in Northern Shoveler. Delacour does not mention it when describing the full plumage of the adult drake, but says of the transition drake ‘‘the rest of the underparts is chestnut, more or less spotted with black’’ The *Handbook* makes no mention of this in transition drakes, but says of the adult drake ‘‘centre of breast, belly and vent bay, when fresh, feathers narrowly edged white (sometimes barred or spotted blackish)’’.

An examination of our series shows the rather surprising fact that every adult and transition drake, where the plumage is sufficiently advanced to detect it, is either barred or spotted on the lower breast, but these markings are frequently subterminal and are only seen when the feathers are lifted and are examined individually. Their incidence is as follows:—

adult drakes	visible	6
	concealed	3
1st year transition drakes	visible	22
	concealed	4

This is illustrated in the photographs, in which No. 1 is well barred and spotted, whereas in Nos. 2 and 3 these markings are concealed. When looked at critically, the basic pattern is one of barring and when spotted, this is due to a break in the barring at the feather shaft. In three examples, the whole of the under-parts are barred, but in the majority of specimens it fades away over the belly. On this series, 66.6% of adult drakes show visible barring, compared with 84.6% of first year drakes.

It is of interest that all the other species of "Blue-winged Duck" show barring or spotting to a variable degree, the races of the Cinnamon Teal providing in this character a somewhat similar example to the morphic cline in the Mallard. The Argentine Red Shoveler, *Anas platalea* Vieillot, links the Cinnamon Teal to the Shovelers by being the only example of a Shoveler with spotted under-parts, but the Cape Shoveler, *Anas smithi* (Hartert) and the Australasian Shovelers have very definite dark barring. There seems every reason to believe that the barring found in Northern Shoveler is therefore ancestral and the higher percentage of visible barring in first year drakes supports this view, thus in a broad sense providing a parallel to Haeckel's Law.

(f) *Dark crescents on the upper breast.* The Northern Shoveler is the only one to develop a completely white upper breast in the full-plumaged drake. The New Zealand Shoveler, *Anas rhynchotis variegata* (Gould) has the white largely mixed with dark crescentic markings, while the Australian race, *A.r. rhynchotis* Latham, has practically no white.

In changing to full plumage, every drake Northern Shoveler, adult and first year bird, that we have examined, passes through a stage of looking remarkably like the New Zealand Shoveler, in having the upper breast heavily marked with dark crescents. This is well seen in the photographs of all three of the first year transition drakes. There seems to us to be good grounds for believing that the fully white breast of the adult is developed not only by a moult, but by colour and subtractive change without moult. This is being investigated at present on live birds.

Conclusions. Plumage sequences in Northern Shoveler are described with special reference to those transient characters, which are found constantly or as a variant in other species of the *Anatidae*. Thus, the white neck ring is found as a constant character in the Mallard, as a variant in the Gadwall, European Green-winged Teal and Yellow-billed Teal and as a transient character in the Northern Shoveler and Pintail. In assessing any character, these three factors must always be considered.

Our findings confirm Delacour's grouping of the "Blue-winged Duck" and their affinity towards the Mallard. Plumage sequences reflect phylogeny rather in the same way that "ontogeny repeats phylogeny" (Haeckel's Law). The Northern Shoveler would appear to be the most highly specialised of the Shovelers, standing at the end of the line of evolution of the "Blue-winged Duck", because its full plumage is the most advanced and during its development, the Northern Shoveler passes through the plumages of the other Shoveler species and shows similar characters in the eclipse and immature plumages.

The fact that five out of six of the transient characters found in Northern Shoveler have already been described as variant characters in other species of the *Anatidae* or in hybrids, indicates that these are ancestral and of great value in tracing lines of evolution.

Acknowledgements. We are most grateful to those who have helped us to obtain our series:— the late Mr. G. Bristow, Mr. B. Cronk, Dr. Edmund

Gleadow, Mr. T. C. Gregory, Dr. David Harrison, Lt. Cdr. Alastair McLean, R.N., Mr. Cyril Mackworth-Praed, the late Dr. A. McMillan, the late Mr. Foster Stubbs, Dr. N. F. Ticehurst and Mr. L. Wright. We are much indebted to Mr. G. Anckorn for the photographs of the specimens.

References:—

[1] J. M. Harrison. "*On the significance of Variations of Patterns in Birds*" Bull. B.O.C. Vol. 73, pp. 37–39, 1953.

[2] J. M. Harrison. "*Further instances of Aberrations of Pattern and Colour in the Anatidae*" Bull. B.O.C. Vol. 74, pp. 52–3, 1954.

[3] J. M. Harrison. "*The Baikal Teal in the British Isles; a New Record and a note on the incidence of the "Bridled Face Pattern*" Bull. B.O.C. Vol. 78, pp. 105–7, 1958.

[4] J. M. Harrison. "*Comments on a Wigeon X Shoveler Hybrid*" Bull. B.O.C.(in press) 1959.

[5] J. M. Harrison. "*Analagous Variation in Mallard and its possible significance*" Bull. B.O.C. Vol. 79, pp. 22–25. 1959.

[6] J. M. Harrison. "*Recurring Analagous Characters in Birds*" The Ibis, 1959. (In press).

[7] J. M. & J. G. Harrison. "*The White Neck Spot Variant in the European Green-winged Teal and the Yellow-billed Teal*" Bull. B.O.C. Vol. 78, pp. 104–5. 1958.

[8] J. M. & J. G. Harrison. "*Further Remarks on the White Neck Spot Variant in the European Green-winged Teal*" Bull. B.O.C., Vol. 79, pp. 25–27. 1959.

[9] J. M. & J. G. Harrison. "*Plumage Variants in drake Gadwall*" Bull. B.O.C., Vol. 79, pp. 78–9. 1959.

[10] J. M. & J. G. Harrison, "*An unusual Plumage Variation in the Wigeon*" Bull. B.O.C., Vol. 76, pp. 125–6. 1956.

[11] J. M. & J. G. Harrison. "*Further Remarks on Variant Wigeon*" Bull. B.O.C., Vol. 77, pp. 130–1. 1957.

[12] J. Delacour. "*The Waterfowl of the World*" 1956.

[13] H. F. Witherby et al. "*A Practical Handbook of British Birds*" 1924.

[14] H. F. Witherby et al. "*The Handbook of British Birds*" 1941.

[15] P. Scott & H. Boyd. "*Wildfowl of the British Isles*" 1957.

[16] E. Mayr, E. G. Linsley & P. L. Usinger. "*Methods and Principles of Systematic Zoology*". 1953.

[17] R. Meinertzhagen. "*Nicholl's Birds of Egypt*" 1930.

[18] T. Pennant. "*British Zoology*" Ed. IV, Vol. II, P. 510. 1776.

[19] J. G. Harrison. "*An Undescribed Normal Plumage Variation of the Drake Mallard*" British Birds, Vol. XLII, pp. 123–4. 1949.

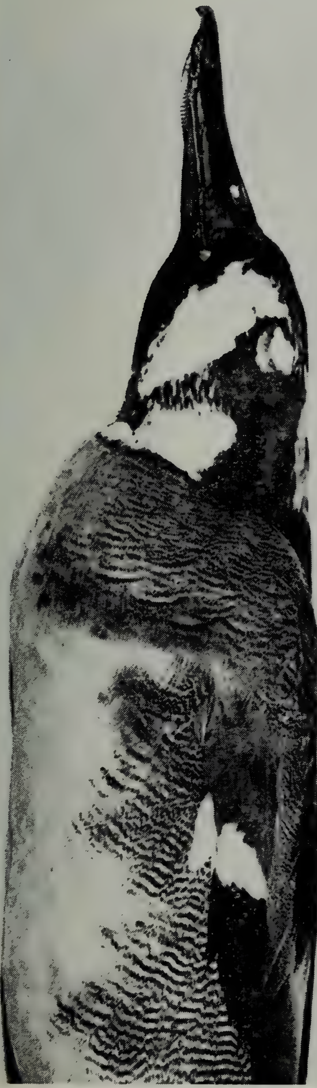
Comments on a Wigeon X Northern Shoveler Hybrid

by DR. JAMES M. HARRISON

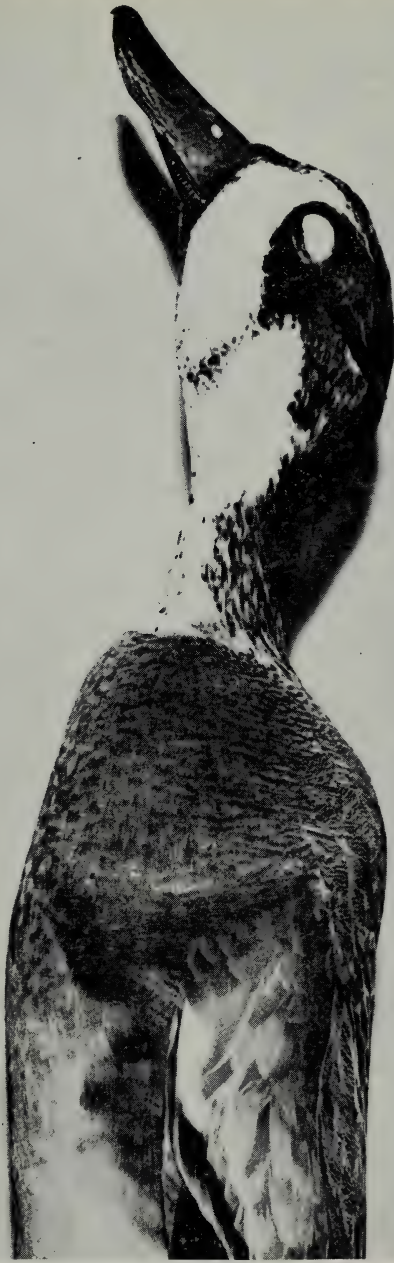
Received, 6th June, 1959

Hybrids of the various species of the *Anatidae* would seem to provide excellent study material for resolving evolutionary and phylogenetic problems, a fact which would suggest that, as a group, they are themselves low in the avian evolutionary tree and may well be regarded as a pool or reservoir of genes, many of which bear characters of an archaic order and with an especial tendency to produce recombinations which reveal fundamental characters of the Family.

The subject of this communication, a cross between a Wigeon, *Anas penelope* and a Northern Shoveler, *Anas clypeata*, is such a case for its history is exactly known and is given here as provided for me by Captain C. R. Peacock, who reared the bird on his pond at Bures in Suffolk and to whom I am indebted for the opportunity to study and investigate this important specimen:—



Teal x Shoveler Hybrid.



Wigeon x Shoveler Hybrid.

"During the winter of 1956–57 my Shoveler drake got his head caught under water and was drowned leaving the duck without a mate. At that time I had twenty-two ducks on my pond of different varieties including a pair of hand-reared Wigeon and one wild drake Wigeon which had come from the Orwell decoy. This wild drake soon took up with the Shoveler duck and they were seen to mate on several occasions. The Shoveler laid nine eggs and sat them well. I had planned to replace these eggs with Long-tailed Duck eggs from Iceland, and on the day I went to do this, some time in the first week in June, I found that the Shoveler eggs were just chipping. She hatched four of which two died within forty-eight hours and the other two were reared on the pond by the Shoveler. They had no special food except that I used to throw porage oats all round the edge of the pond for all the young duck. The two ducklings looked exactly like young Wigeon in their early days, and W. Payn who saw them in their first fortnight was convinced that they could only be of Wigeon parentage. They both did extremely well, taking a lot of fly off the top of the water, and rapidly learned to "shovel" like their mother. When young they did occasionally make some kind of raucous noise, but as soon as they became adult they apparently became mute and I never heard any sound from either of them. About September 1957 one of them started to show a green colour on the head; previous to this they had both been marked like a Shoveler duck but of a much redder colour. One of the birds was soon obviously a drake, his plumage round the tail being like a Wigeon drake and his breast having the characteristic Wigeon mushroom colour. His most marked feature soon turned out to be his cream cheek which was divided by a dark green bridle, perhaps ½ inch wide, descending the cheek in a semi-circle, to meet under the beak.

The beaks of both birds were always of very dark blue and of Mallard shape, having nothing of the Shoveler or the upturned delicacy of the Wigeon. By the time the first bird had almost got its full plumage the other one was to all intents and purposes going to be a duck, but suddenly decided to be a drake, and assumed almost exactly the same colouring as the first one, except that the bridle on the cheek was very much less pronounced, or rather the cream area of the cheek was much smaller and the bridle much wider with only a very small area of cream behind it below the eye. In eclipse I must confess I took little notice of them but think that they reverted to the reddish plumage of adolesence while still keeping some green on the head. In their second year they both feathered early, and the bridle on the first bird seemed to be narrower and not so sharply outlined. The green on their heads also appeared to be darker and bluer. Neither of them ever became very tame." C.R.P. 24. III. 59.

This most excellent and full description deserves the closest attention containing as it does the fullest details of the life history of this interspecific hybrid and so constitutes a most valuable contribution to the literature of such cases.

The bird came into my possession on 24th March, 1959, and, after observation in life was narcotised and examined anatomically, subsequently being prepared as a cabinet specimen (Fig. I Right), as it was vital to preserve it in full plumage. The striking morphological characters shown by this cross can be appreciated from the plate, and can at once be recognised as having a very similar pattern to the remarkable hybrid bred by Major W. H. Payn between the European Green-winged Teal, *Anas crecca crecca* and the Northern Shoveler, *A. clypeata* particularly in the marked facial bridling (Fig. I Left).[1] [2] This is a character concerning which I have commented on in full in previous communications[3] and it is only necessary here to state that the present hybrid lends further support to the hypothesis therein advanced as to its origin and the importance of it as a recurring homologous character in the *Anatidae*. In other respects the specimen presents the following characters:— the head, although a drake, presents minimal evidence of its male *A. penelope* parentage—this shows clearly that a phylogenetic specific unit character in any interspecific cross is dominant to characters transmitted by the immediate parental inheritance.

The pale yellow forehead and crown of *A. penelope* is completely absent and the reddish bay colour of the rest of the drake Wigeon's head and neck when in full plumage, is only seen in a minimal degree as a few streaks here and there on the sides of the face behind the eyes and down the sides of the neck and as some suffusion on the throat. The pale yellow of the drake Wigeon is replaced by dusky black from the base of the bill over the crown and down to the nape. The crown marking is broken by a whitish area about a half inch from the base of the culmen. Round the eyes and over the ears the colour is predominantly bottle green, strongly irridescent. From the chin down towards the root of the neck anteriorly is a blackish line, most dense at the chin itself: the rest of this marking is best described as speckled dusky with a light bay coloured suffusion. The rest of the face is whitish, which colour runs up in front of and over the eyes as fine crescentic markings on either side. Passing downwards towards the throat from below and behind the eyes on each side is a dusky speckled bridle only 4 mm. (3/20 inch) wide confirming Captain Peacock's observations during life that this feature had diminished, and there almost, but not quite, joining the dusky marking on the front of the neck. This striking pattern has already been compared with that of the drake of the Baikal Teal, *A. formosa*. The dorsal surface presents a mixture of characters: the root of the neck has more the appearance of this area in the duck of *A. penelope* with much fine dusky vermiculation some of which tends towards that seen in the drake Wigeon, but none of the bold crescentic sepia feathers of the duck Shoveler. The mantle proper suggests that of the drake of *A. clypeata* while the scapulars and tertials (longest secondaries) are strongly drake *A. penelope*. The rump feathering is blackish as in the drake Shoveler. The upper tail coverts are coarsely vermiculated, coarser than in the drake of *A. penelope*. The central tail feathers are blackish sepia and elongated as in the adult drake Wigeon: the remainder are rather similar to those of the duck of *A. clypeata* though grey instead of brownish ash.

The under parts show a distinct breast shield of strong rusty vinaceous brown (dark mushroom) with many pin-point dusky spots. This extends to a lower level than that of the drake Wigeon. The rest of the belly is white and the under tail coverts are black as in adult drake Wigeon. The flanks show some light bay wash with sepia vermiculations and towards the sides of the tail there is greyish vermiculation.

Wings: The characters shown in the wings of this hybrid are of much interest for in respect of the general appearances they may be regarded as intermediate between the parent species. The lesser and median coverts incline to the blue of the Shoveler, not quite so blue as in the drake in full plumage, but nevertheless rather more blue than in the adult drake. The greater wing coverts are mottled greyish white, in this respect of course approaching the white of *A. penelope*. Those adjacent to the speculum are tipped with dusky black subterminally and with pale bay terminally. This latter character is an important one and since bay tipping is not a usual character in either *A. penelope* or *A. clypeata* but is one of those belonging to the range of normal morphology of *A. formosa* it may be suggested with some reason, that this too, as well as the facial pattern and colouring, is derived from the latter species. The speculum itself is bright green as in the drake of *A. clypeata* and further resembles this in having only a narrow blackish distal border. The longest secondaries (tertials), as already mentioned, are predominantly drake Wigeon in character.

The specimen is an anatomical male: section of the testes show normal seminiferous tubule formation, the individual tubules being packed with primary spermatocytes, i.e. the testes are in a resting state. No active spermatogenesis is as yet apparent. Sertoli cells are not prominent and numerous groups of interstitial cells are visible.

The cranial vault was not fully pneumatised and conformed to a typically dabbling duck pattern.

Comparative details concerning the measurements of the pectoral girdle, a femur and the syrinx will be communicated later, but it can be stated here that no visible pathology was apparent.

The following tabulation of assignable characters is of interest, and added are those of the parent species of appropriate sex and of a drake Baikal Teal *A. formosa* in full plumage.

	A. penelope Male	*Hybrid Male*	*A. clypeata Female*	*A. formosa Male*
Wing coverts:	White	Mottled bluish grey and white	Dull blue	Brown
Speculum:	Bronze-green broadly bordered black	Bright green bordered above by pale bay and black, below by narrow black	Dull bronze-green: no marked bordering	Bronze-green bordered above by strong bay, below black and white
Long secondaries (Tertials) *outer vanes:*	Black narrowly bordered white	Black narrowly bordered white	Brown bordered whitish	Black broadly bordered by strong bay, below black and white
Under wing-coverts:	Greyish-white finely streaked pale grey	Fore-edge and carpal coverts greyish-white centres of feathers darker grey; rest whitish. All coverts suffused pale bay	Fore-edge of wing pale bay centres of feathers dusky grey: rest white. Distal feathers pale grey	Fore-edge of wing broad strong mouse brown, rest white. Distal group grey
Axillaries:	Greyish-white vermiculated	Whitish, very faint dusky wash towards tips	White	White speckled grey

	A. penelope Male	*Hybrid Male*	*A. clypeata Female*	*A. formosa Male*
Breast-shield:	Pale mauve sometimes spotted or barred	Strong rusty brown slightly tinged brown spotted with small dusky spots	No breast shield. Area boldly marked crescentic in dark sepia	Pale mauve always boldly spotted black
Lower neck and Mantle:	Pale grey vermiculated finely black and white	*Lower neck:* Brownish-grey finely vermiculated pale ash and sepia. *Mantle:* pale greyish sepia edges of feathers narrowly edged pale ash	Sepia narrowly edged pale bay	*Lower neck:* Rich brown, small dusky centres to feathers. On sides strong dark grey closely vermiculated
Lower back:	As rest of upper parts but paler	Dark sepia, feathers edged bay	Dark sepia, feathers edged pale bay	Mouse grey-brown centres of feathers pale sepia
Belly:	White	White: obscure narrow transverse barring	Rich bay-brown varies individually	White: obscure narrow transverse barring
Under tail-coverts:	Black	Round anal orifice vermiculated brownish-grey: rest black	Pale bay-brown boldly spotted sepia	Black bordered strong bay: tips of longest whitish grey bordered palest bay
Flanks:	Pale grey vermiculated same colour	Vinaceous rust, vermiculated pale sepia. Grey at sides of tail with slightly darker grey vermiculations	Rich bay longitudinally striated sepia	Strong dark grey closely vermiculated stronger grey
Rump:	Pale grey faintly vermiculated. Root of tail embraced by pure white terminal flank feathers	Pale grey coarsely vermiculated grey. Root of tail embraced by pure white terminal flank feathers	Dark sepia, narrow arrow-shaped bay markings	Same as lower back. Root of tail embraced by narrow band of pure white terminal flank feathers
Head and Neck:	Forehead and crown pale yellow extending to nape where minutely tipped dusky. Rest of neck to root rich chestnut bay, slightly tipped dusky	Forehead dusky interrupted at fore-crown by band of white speckling. Rest of crown to nape dusky-bronze. Rest of neck to root rich iridescent green	Pale bay streaked dusky-sepia As above	Whole of crown dusky-purple delimited from above eyes by narrow white line. Rest of neck narrow iridescent green followed by dark bluish black band and then greyish-brown to root

	A. penelope Male	*Hybrid Male*	*A. clypeata Female*	*A. formosa Male*
Sides of face and neck:	Rich chestnut bay, around eyes dusky greenish spots, lower lid yellowish white	At base of lower mandible dusky brown bronze. Around eyes and auricular region strong iridescent green extending down sides of neck where flecked with bay. Rest of face whitish cream extending downwards to root of neck and upwards in crescentic shape to above eyes. White of sides of cheeks divided by thin dusky speckled bridles	Light brown finely striated sepia	At base of lower mandible thin blackish line. Sides of face from above eyes backwards towards root of neck strong iridescent green: rest of face from base of lower mandible backwards below the iridescent green strong cinnamon. Lower lid cinnamon. Below this, running downwards and slightly backwards a strong blackish bridle on either side giving bimacular pattern. Facial pattern picked out by narrow white lines
Throat:	Chin dusky: very slight dusky line down centre to root of neck	Light chin spot, dusky black throat and dusky speckled line to just short of root of neck. Throat and adjacent sides of neck suffused pale bay	Chin pale, rest of neck brownish finely striated pale sepia	From chin to about mid-point of neck strong sooty black the strong blackish bridles run into the black of the throat

Soft Parts:

Iris:	Brown	Brown	Brown	Brown
Bill:	Bluish grey, tip and nail dusky	Slate grey nail blackish	Brown, base olive green with dusky oblique spots, nail brown	Bluish grey, nail dusky. Lower mandible paler
Tarsi, toes and webs:	Pale greyish, toes and webs dusky	Dull brownish ochre, toes same, joints and webs dusky	Dull orange yellow, toes same, webs dusky	Greyish, toes same, joints and webs dusky

	A. penelope Male	*Hybrid Male*	*A. clypeata* Female	*A. formosa Male*
		Measurements in mm.		
Wing:	263	255	222	217
Bill:				
Length from feather margin:	36.5	45.5	62	40
Width at nostrils:	14.5	17.5	17	13.5
Width at widest point:	16	19	30	15
Tarsus:	38	39	35.5	36.5
Middle toe with claw:	50	49.5	48.5	47
Tail:	118	96	80	79

Discussion: Whilst a vast literature exists on the genetics of birds resulting from the study of this subject by breeding experiments and operative procedures, as all workers in this field of research know, it has mostly been done on domesticated varieties, domestic fowl, pigeons, duck, budgerigars and canaries amongst others, but little has been done on wild species, and relative material in museums has been sadly neglected in so far as these problems are concerned. Our knowledge on inheritance is based largely upon the above work and upon the data acquired by the patient, intensive and classical investigations e.g. by Morgan et alia (1919) (*et seq.*) on the Fruit-Fly, *Drosophila* which has clarified many obscure issues.

Knowledge resulting from such research has its practical applications in husbandry and live stock management and therefore an economic importance and in consequence has attracted many eminent investigators. It seems a pity therefore that more has not been done in this subject in pure ornithological research. The value of the present specimen, and of course other such specimens, is at once apparent.

From the description and tabulation of characters, it can readily be appreciated that certain of these are clearly intermediate, while others, particularly the striking facial pattern, cannot in any way be ascribed to either parent species but can, and do, relate to another species, viz., to *A. formosa*. This particular character of bridling together with bimaculation, which is believed to be the same but only a matter of degree, has been recorded in other hybrids of known parentage, e.g. in that between the European Green-winged Teal, *A.c. crecca* and the Northern Shoveler, *A. clypeata*. It has also occured in individuals in the wild e.g. in a presumed hybrid between the Teal, *A.c. crecca* and the Pintail, *A. acuta*[4] and in the case of the so-called ''Bimaculated Duck'', *A.* (*Querquedula*) *glocitans* of the earlier authors of which the parentage is now believed to have been a Teal, *A.c. crecca* and a Mallard, *A. platyrhynchos.*[5] Concerning this latter case a communication is in course of preparation.

Mayr, Linsley and Usinger (1953)[6] remark on "*Phylogenetic Evidence*" quoting Simpson (1945) "Phylogeny cannot be observed. It is necessarily an inference from observations that bear on it, sometimes rather distantly, and that can usually be interpreted in more than one way."

In this, and other cases cited however, there would seem little doubt that bridling and bimaculation are to be regarded as an expression of a unit character, always having the same location both when occurring spontaneously as well as when resulting from interspecific hybridisation. This would seem to determine the character incontrovertably as due to reversionary recombination.

It can also be postulated on the evidence put forward that a phylogenetic specific unit character is dominant to the specific characters transmitted by the immediate parentage of the cross.

A further point of considerable interest is the fact that the green sides of the face in this specimen must also be regarded as a character derived from *A. formosa* unless one is to assume, with in my opinion very little justification in this case, that the drake *A. clypeata* head colouration (when in full plumage) can be transmitted by the duck of that species: moreover of course the colours are different. This again constitutes a phylogenetic specific unit character dominating and suppressing the parental inheritance of this particular hybrid. It should be stressed in this case that the green is stronger—more brilliant, matching both that of *A. formosa* drakes (when in full plumage) and the green on the head of Major Payn's hybrid between the European Green-winged Teal and the Northern Shoveler. This observation was confirmed during life by Captain Peacock for as stated in his letter "The green on their heads also appeared to be darker and bluer."

It may also be observed that this specimen also demonstrates by the measurements, that a plastic organ such as the bill of the Shoveler when under the influence of interspecific hybridisation, quickly loses its adaptive and specialised, though nevertheless superficial character and supplies further support and justification for placing this species in the genus *Anas* as was done by Delacour.[7]

Summary and Conclusions:

A hybrid of known parentage and age between the Wigeon and Northern Shoveler is described: it is a male of one year and ten months of age, anatomically normal and free from pathology. Its gonads, both macroscopically and microscopically suggest that it would have come into breeding condition in due season.

Its external morphology is in part intermediate between the two parent species, but it also presents certain characters which are regarded as atavistic. These latter include the facial pattern, and green on the head and neck found in *A. formosa* ,and a character of the speculum in the bay coloured distal border, which is also considered referable to that species.

A spotted breast-shield, as has been recorded in various previous communications, is a reversionary character which occurs in a number of duck species and is probably ancestral to *A. formosa.*

It is concluded that great importance attaches to hybrids of the *Anatidae*, particularly those of known parentage and age, as being likely to throw light upon the phylogeny and affinities in the evolution of the Family.

This cross has demonstrated beyond any question that reversionary mutations, in which species unit characters acting phylogenetically are involved, become securely fixed in the individual and can persist certainly beyond the transient stage of immaturity.

It has also established the fact that such unit characters are dominant even to the transmission of the inheritable characters of the immediate parents of the hybrid.

This is Darwinian Atavism at its best.

Acknowledgements:

I am greatly indebted to Major W. H. Payn for acquainting me with the existence of this hybrid and for kindly introducing me to Captain C. R. Peacock; and to the latter for generously making the specimen available to me for full investigation and comment.

References:—

[1] Harrison, James M., (1953) "*On the Significance of Variations of Pattern in Birds*". Bull. B.O.C., 73, pp. 37–40.

[2] Manson-Bahr, P. (1953) "*Reverse Mutation in Ducks.*" Bull. B.O.C., 73, pp. 61. 62.

[3] Harrison, James M., (1953) "*Further Instances of Aberrations of Pattern and Colour in the Anatidae.*" Bull. B.O.C., 74, pp. 52. 53.

[4] Meinertzhagen, R., (1930) *Nicoll's Birds of Egypt.* II, p. 469. Plate XIX.

[5] Dresser, H. E., (1871) *Birds of Europe*, VI, p. 469.

[6] Mayr, E., Linsley, E. G., and Usinger, R. L. (1953) *Methods and Principles of Systematic Zoology*, p. 168.

[7] Delacour, J., (1934) "*La Systematique des Anatidés et leurs Moeurs.*" Proc. VIIIth Int. Orn. Congr. Oxford. p. 229.

Tuberculosis in a Wigeon

by MAJOR GENERAL C. B. WAINWRIGHT

Received 12th May, 1959

In the second week of March, 1958, my assistant on the ringing station at Abberton Reservoir, Essex, Mr. Roy King, saw a hen Wigeon swimming in the water among some willows. The bird was caught and proved to be in very poor condition, soon dying. It was sent to Miss L. Frederick, a biology lecturer, who sent a diseased lung to the Ministry of Agriculture Veterinary Laboratory at Weybridge, where infection with tuberculosis was diagnosed by Mr. I. F. Keymer. (Laboratory Report No.E.2364).

This is only the second confirmed case in a Wigeon, the first having been found by Dr. J. G. Harrison in the Orkneys in May 1952. However, I think tuberculosis may prove to be not uncommon in Wigeon. As already noted by Randall and Harrison, I found a hen Wigeon dead at Abberton on 24th November, 1950 and the post-mortem report from the Zoological Society of London was of tuberculosis of the lungs and air-sacs, but the culture was subsequently lost in the laboratory to which it was sent for culture.

It is perhaps not without interest that all three of these Wigeon had pulmonary infection, whereas in the majority of birds, alimentary tuberculosis is more common.

Reference:

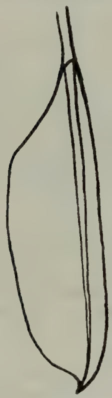
Drs. K. Randall & J. G. Harrison. "*A Case of Avian Tuberculosis in a wild Wigeon*" Bull. B.O.C., Vol. 76, pp. 42–46. 1956.

Aberrant Juvenile Blackbird *Turdus merula merula* Linnaeus

by R. G. Finnis

Received 30th May, 1959

An interesting variation in probable partial albinism in this species was brought to me on the 27th May, 1959. The bird, a juvenile, was found dead in the grounds of Southfields County Secondary School, Gravesend, Kent. It was a pale bird with much grey in the feathers of head, back, mantle, rump and scapulars. The shoulders and lesser coverts wers also very grey. The remainder of the wings, greater coveret and remiges and also the retrices were pale grey with faint buff barring. The feathers appeared to be more fragile than in a normal specimen and it is perhaps significant that the tips of the retrices were already considerably abraded: there was one feather missing. The underparts, though pale were more normally coloured. The bill and legs were leaden pink when found. The eyes appeared to be dark.



I should add that for several years now one or more adult Blackbirds showing considerable areas of white on wings and body have been seen in the immediate area of this school. The specimen has been prepared by Dr. James M. Harrison and is now in his collection. It is a male. The sketch of a tail feather from this specimen shows the general pattern of wear.

A new subspecies of *Anthoscopus minutus* (Shaw & Nodder) from Cape Province

by Dr. J. M. Winterbottom

Received 22nd May, 1959

Anthoscopus minutus gigi subsp. nov.

Differs from *A.m.minutus* (Shaw & Nodder) in its much duller, browner underparts; and also in being somewhat browner, less grey, above.

Type: ♂, Oudtshoorn, 10th April, 1956, in South African Museum, Cape Town, collected by J. M. Winterbottom. Collector's number, 429; S.A.M. number, 20323 a.

Range: Only known from Oudtshoorn, but probably occurs throughout the Little Karoo. Does not occur further east, however, for specimens from King William's Town and Grahamstown in the British Museum are *minutus;* and not north of the Swartberg Mts., since a specimen from Klaarstroom is also *minutus.*

Material examined: *A.m.minutus,* 23 (Philipstown, Hanover, Richtersveld, Kamieskroon, Fraserburg, Beaufort West, Kliprand, Doornbaai, Clanwilliam, Cold Bokkeveld, Klaarstroom, Lambert's Bay, Leipoldtville, Berg River, Saldanha Bay, Mamre, King William's Town, Grahamstown).

A.m.gigi, 3 (South African Museum, 2; East London Museum, 1.).

The race is named after Mr. G. G. Smith, Chairman of the Board of the East London Museum, who has done so much to build up the bird collection in that institution.

- 9 NOV 1959

Notices

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 3/– each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959

17th November, 15th December.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

PURCHASED

Edited by
Dr. JEFFERY HARRISON

Volume 79
No. 9

December
1959

BULLETIN

OF THE

BRITISH ORNITHOLOGISTS' CLUB

Volume 79
Number 9

Published: 3rd December, 1959

-4 DEC 1959
PURCHASED

The five hundred and seventy-sixth meeting of the Club was held at the Rembrandt Hotel, S.W.7., on Tuesday, 17th November, 1959, following a dinner at 6.30 p.m.

Chairman: CAPTAIN C. R. S. PITMAN

Members present, 31; Guests, 4; Total, 35.

Exhibition of Hybrid Duck

Mr. Bryan Sage exhibited a hybrid Pintail x American Green-winged Teal and a hybrid Pintail x European Green-winged Teal. A paper dealing with these will appear in a later Bulletin.

Professor C. G. Sibley then gave a most interesting talk, illustrated by colour slides and diagrams. Professor Sibley has provided the following paper in elaboration of his talk. In the discussion which followed Mr. Max Nicholson mentioned the field study of the hybrid Yellow Wagtail population at Beddington Sewage Farm and suggested that the shifting zone of hybrids between the Carrion and Hooded Crows would provide an excellent research subject, before the Carrion replaced the Hooded Crow in Scotland, as the zone of hybridisation is moving northwards at two miles a year.

Dr. James Harrison mentioned the absence of hybrids between the Mandarin and Carolina ducks and Professor Sibley said that in spite of having identical egg white proteins, the chromosomes of the Mandarin were so utterly different, that this was the precluding factor. Indeed, he did not think the Mandarin had hybridised with any other species of the *Anatidae*.

Hybridization in Birds: Taxonomic and Evolutionary Implications

by Dr. Charles G. Sibley

Hybridization may be defined as interbreeding between populations in secondary contact, regardless of their taxonomic rank. The evolutionary results of hybridization depend upon the reproductive success of the hybrids. If they are as successful as the parental genotypes they will form a genetic bridge between them and, if the hybrid contact is large, an intermediate population will become established. Gene migration via this intermediate population will increase the variability available to both parental populations and natural selection will gradually produce a clinal pattern of geographic variation. During the early stages of the secondary contact the variation in the hybrid zone will be great due to the recombination of the parental genomes but as selection fashions new adaptive peaks the variation will gradually be reduced to a normal amount for the environment.

Taxonomically this situation is not difficult to assess if one is able to establish that selection is *not* against the hybrids. If they are as abundant in the intermediate zone as are the parental types in their respective areas, if they show no evidence of infertility or lack of viability, and if there is little or no evidence of preferential mating of like phenotypes, it is highly probable that selection is not acting against them. If this is so, regardless of the morphological differences between the parental populations, they must be treated as conspecific for so they have proved themselves (Sibley, 1957).

This situation describes many we encounter today among birds in which the geographic isolation of the parental populations began in the Pleistocene and has but recently ended, usually due to the agricultural activities of man. As examples may be cited the Yellow-shafted and Red-shafted flickers (*Colaptes auratus*), the Baltimore and Bullock's orioles (*Icterus galbula*), the Rose-breasted and Black-headed grosbeaks (*Pheucticus ludovicianus*) and the Rufous-sided Towhees (*Pipilo erythrophthalmus*) of North America and the Yellow-rumped and Scarlet-rumped tanagers (*Ramphocelus flammigerus*) of Colombia. These examples, studied by my colleagues and myself (Sibley and West, 1959; Sibley, 1958) over the past several years, involve pairs of previously isolated populations brought into secondary contact by the planting of trees across the grassland prairies of central North America or the cutting of virgin rain forest on the western slope of the Andes. A report on the flickers is under preparation by Dr. Lester L. Short, Jr. and the grosbeaks have been studied by Dr. David A. West. Additional examples from Europe and elsewhere could be cited (Sibley, 1957, and in press).

The results of hybridization are vastly different if selection is against the hybrids. Hybridization occurs because the reproductive isolating mechanisms of the two individuals concerned are not effective in preventing mating. Therefore when selection acts against the hybrid offspring of a mixed mating it is the parental genotypes which are eliminated. Thus those individuals with faulty isolating mechanisms leave fewer offspring than those with effective ones and in each succeeding generation there are fewer of the former and more of the latter. Because birds utilize visible and audible characters in species recognition it is these which are affected by this source of selection. Thus a process of ''reinforcement'' of isolating mechanisms occurs and the characters of plumage, behaviour and/or voice which function as isolating mechanisms between the two species concerned are gradually improved and accentuated in each. As this process continues the incidence of hybridization declines.

The taxonomic problems associated with this process are of two kinds, (1) those involving borderline cases between species and subspecies and (2) those relating to the interpretation of the results of the reinforcement of isolating mechanisms. The first type has seemed fairly numerous as long as a morphological species concept has predominated. All of the cases cited above (flickers, orioles, grosbeaks, towhees, tanagers) have been considered to be borderline cases simply because the interbreeding populations are morphologically easily separable. In fact, true borderline cases should be rare for selection must balance neatly on a biological knife-edge if a borderline situation is to endure for long enough to be detected. One possible example is found in the secondary contact between the Indigo Bunting (*Passerina cyanea*) and the Lazuli Bunting (*P. amoena*) in North America. Although these two populations hybridize over a wide zone across the Great Plains (Nebraska, South Dakota) we have some evidence that there is preferential mating, possibly some habitat segregation and incomplete breakdown of isolating mechanisms. At this time it is impossible to be certain which way the pendulum of selection will swing although our uncertainty may be the result of insufficient data (Sibley and Short, 1959b).

An interesting example of the rapid reinforcement of isolating mechanisms has been described by Vaurie (1957). The Siberian Azure Tit (*Parus cyanus*) rapidly extended its range to north-western Europe in the latter part of the last century and thus came into contact with the Blue Tit (*P. caeruleus*), a close relative. The two hybridized freely at first but the incidence of hybridization soon declined and the invader partly withdrew although the two remain sympatric in part of eastern Europe. Today only an occasional hybrid is found and these occur primarily at the edge of the overlap area. Presumably the isolating mechanisms of the sympatric populations have been reinforced and hybrids now are produced only when pioneering *cyanus* come into contact with non-reinforced *caeruleus*.

A slightly different aspect of the same phenomenon is illustrated by two species of Indian bulbuls, *Pycnonotus cafer* and *P. leucogenys*. These two are morphologically distinct and are sympatric over much of India and Pakistan. In the areas where both are common hybrids are occasionally found but they are rare. In one area, centering on the towns of Kohat and Bannu in the old North-west Frontier Province, *P. cafer* is rare and *P. leucogenys* is common. Hybrids are also numerous apparently because the low population density of *cafer* reduces the opportunity for the scattered members of that species to find conspecific mates and, like captive animals, they pair with the available species which best fits their innate species recognition mechanisms. If this is a correct interpretation of the situation we may expect the incidence of hybridization to decline in the Kohat-Bannu region because, judging from the low incidence of hybridization elsewhere, the hybrids are selected against (Sibley and Short, 1959a). A hybrid woodpecker discovered by Miller (1955) in the Carmen Mountains of northern Mexico probably resulted from the same conditions. One of the parental species, *Dendrocopos scalaris*, is common and the other, *D. villosus*, is rare. These two species come into limited contact in other places but no other hybrids are known, suggesting that hybrids are selected against and that reinforcement has taken place where the contacts have been of long duration. In the other areas of contact it also seems that the two species are of more nearly equal abundance.

Perhaps the most complex hybrid situation known in birds is that of the Mexican towhees, *Pipilo erythrophthalmus* and *P. ocai*. Between these two morphologically distinct and ecologically replacing species we have found every conceivable gradation of breeding response from complete breakdown of reproductive isolation to complete sympatry without any evidence of hybridization. At such localities as Cerro Viejo and Cerro Tequila in western Mexico (Jalisco) all individuals are hybrids, there is no preferential mating and no indication that selection is against the hybrids. On Cerro San Felipe and Cerro Yucuyacua in south-eastern Mexico (Oaxaca) the two pure types live in complete sympatry and yet, in collections of nearly 200 specimens from this area, no evidence of hybridization is found. Between these two extremes there exist many populations of intermediate structure. Gradients of hybridization exist in several places between pure populations at the two ends. In one area, the high ridge between Mount Orizaba and Mount Malinche in eastern Puebla, there is evidence suggesting that the hybrids are selected against because of the absence of a suitable intermediate habitat and reinforcement seems to be in progress (Sibley, 1950; 1954; Sibley and West, 1958).

The taxomonic treatment of the Mexican towhees must frankly be admitted to be beyond the scope of Linnaean nomenclature. We call them two species because they are sympatric in several places and are morphologically so distinctive. In several other places they are clearly behaving as two subspecies and swamping is in progress and in still other localities they are on the borderline. This merely indicates what has been said in various ways; that species exist because ecological niches are discontinuous—the environment both selects and permits. If a favourable intermediate habitat is available hybrids may prosper, if not they will be eliminated. Thus whether selection is against or not against hybrids depends partly upon the nature of the environment and not only upon the amount of genetic divergence which has been attained during previous isolation. In the region occupied by the Mexican towhees the topography, climate, vegetation and other environmental factors vary enormously over short distances and in all cases we can see correlations between these factors and the characters of the birds.

The reinforcement of isolating mechanisms by selection against hybrids frequently affects visible characters of plumage color and structure. In most birds the males carry the ''releasers'' of species recognition and hence it is these which are accentuated. The result is an increase in the diversity of plumage characters among sympatric species. This source of selection acts in any community of species, whether actual hybridization occurs or not, and is an important factor in the production of species specific plumage and voice characters in birds. The effects of sexual selection, an intraspecific phenomenon, frequently add to the degree of sexual dimorphism and also to interspecific differences (Sibley, 1957). The effects of these two sources of selection is either to increase interspecies differences, intersexual differences, or both. The extreme cases will obviously occur in those groups with the most intense selection for both factors. This is borne out by the birds of paradise, the humming birds, the manakins, the grouse and other groups which are (1) polygamous, (2) lack a pair bond, (3) possess group courtship (lek) displays and (4) form occasional hybrids with sympatric relatives. Under these conditions a high selective premium is placed upon behaviour and structures which have a strong heterosexual valence and which provide rapid, correct species recognition. Sexual selection acts to strengthen the former and selection against hybrids the latter. The same or different characters may be involved but usually they are the characters of the males only. Thus sexual dimorphism is increased and we find that the result is a group of birds in which the males are brightly colored and possessed of distinctive plumes, wattles, crests and other distinctive structures coupled with highly specific courtship displays. The females of such a group may be drab, cryptically-colored birds with few differences to be found among the species. This is true for those listed above as well as for the pond ducks (*Anas)* and the pheasants (*Phasianinae).* In some of these groups there are exceptional species in which the lack of sexual dimorphism is correlated with absence of polygamy, presence of a pair bond, individual courtship and lack of hybridization with relatives. These species provide the best available proof for the correlations mentioned. They are discussed in a previous paper (Sibley, 1957).

The taxonomic difficulties arise from the fact that in these groups we find what appears to be conflicting evidence of relationships. Pairs of species with remarkably different looking males have similar females and occasionally hybridize. There has been a tendency to attach great taxonomic importance to the diverse male plumages and to ignore or at least undervalue the similar females and the hybrids which argue eloquently for taxonomic treatment indicating close relationship. It is within these groups that we find nearly all of the examples of so-called ''intergeneric'' hybrids—intergeneric because the secondary sexual characters of the males have been used as the basis of generic descriptions. These very characters may to some degree be the result of reinforcement due to selection against hybrids. In these groups too we find many monotypic genera founded upon male characters only, thus the characters of one sex and age class, which at best are species characters, are used for generic separations. This leads inevitably to monotypic ''genera'' because species characters have been arrogated to a higher taxonomic level. The result is taxonomic inflation and we see the effects in such groups as the humming birds in which 327 species are placed in 123 genera, 73 of which are monotypic. Among 37 hybrid combinations in the humming birds 25 are ''intergeneric'' and only 5 are intrageneric! The other seven are doubtful for various reasons. It will be a long and difficult task to set this ridiculous situation straight not only because of the biological problems involved but because of the nomenclatural tangles which will have to be resolved.

This seems to paint a rather gloomy picture of the future of avian taxonomy. We cannot trust external morphology as the basis of generic distinctions, morphologically different populations may be conspecific, and Stresemann (1959) believes that we may never be able to determine the relationships of the higher categories to one another because "comparative morphology, comparative physiology, (and) comparative ethology have failed us after nearly 200 years of efforts". Although one can applaud his chastisement of false prophets I do not completely share Stresemann's pessimism. There is at present a resurgence of interest in comparative anatomy and the false starts made in applying behaviour to systematics are being corrected and its limitations becoming better understood. I agree with Mayr (1959:297) that although it is disconcerting to discover that our system still contains polyphyletic groups the situation is not hopeless. At least we are beginning to understand *why* morphology, behaviour, ectoparasites and other characters may sometimes give false answers and such understanding is the first step towards correct evaluations. The search for new evidence of relationships has not been fruitless and there is good reason to be optimistic about the development of new techniques which will uncover convergence and reveal phylogeny. For example, the structure of proteins is genetically determined and is, to a heartening degree, free of some of the aspects that make gross morphology misleading. The egg-white proteins have already provided new evidence of inter-ordinal relationships and have revealed convergences (Sibley, 1960) and there is no reason to doubt but that techniques as yet undeveloped will be brought to bear on taxonomic problems.

ACKNOWLEDGMENTS

Studies mentioned in this paper have been supported by the National Science Foundation, The American Academy of Arts and Sciences, The American Philosophical Society and the New York State College of Agriculture, Cornell University.

References:—

Mayr, E. (1959). Trends in avian systematics. *Ibis*, 101:293–302.

Miller, A. H. (1955). A hybrid woodpecker and its significance in speciation in the genus *Dendrocopos*. *Evolution*, 9:317–321.

Sibley, C. G. (1950). Species formation in the red-eyed towhees of Mexico. *Univ. Calif. Publ. Zool.*, 50:109–194.

Sibley, C. G. (1954). Hybridization in the red-eyed towhees of Mexico. *Evolution*, 8:252–290.

Sibley, C. G. (1957). The evolutionary and taxonomic significance of sexual dimorphism and hybridization in birds. *Condor*, 59:166–191.

Sibley, C. G. (1958). Hybridization in some Colombian tanagers, avian genus *Ramphocelus*. *Proc. Amer. Phil. Soc.*, 102:448–453.

Sibley, C. G. (1960). The electrophoretic patterns of avian egg-white proteins as taxonomic characters. *Ibis*, 102:in press.

Sibley, C. G. (in press). Origin of isolating mechanisms. In, Vertebrate Speciation, University of Texas Press, Austin.

Sibley, C. G. and L. L. Short, Jr. (1959a). Hybridization in some Indian bulbuls *Pycnonotus cafer* x *P. leucogenys*. *Ibis*, 101:177–182.

Sibley, C. G. and L. L. Short, Jr. (1959b). Hybridization in the buntings (*Passerina*) of the Great Plains. *Auk*, 76:in press.

Sibley, C. G. and D. A. West (1958). Hybridization in the red-eyed towhees of Mexico: The eastern plateau populations. *Condor*, 60:85–104.

Sibley, C. G. and D. A. West (1959). Hybridization in the rufous-sided towhees of the Great Plains. *Auk*, 76:326–338.

Stresemann, E. (1959). The status of avian systematics and its unsolved problems. *Auk*, 76:269–280.

Vaurie, C. (1957). Systematic notes on Palearctic birds. No. 26 Paridae: the *Parus caeruleus* complex. Amer. Mus. Nov., no. 1833:1–15.

Notes on the Ploceinae

Part Two

by Mr. R. E. Moreau

Received 20th June, 1959

P.castaneiceps, P.bojeri and P.s.aureoflavus

In discussing these birds I am indebted especially to Mr. J. G. Williams.

The golden weavers met with sympatrically in East Africa all, apart from a few difficult specimens, are of three types which are well figured by Mackworth-Praed & Grant (1955) under the following names:

(1) *P.castaneiceps:* In the male the top of the head is golden, with chestnut in a band across the occiput and a (variable) amount of light chestnut wash on the breast. The back and the edges of the remiges and rectrices are the dullest and greenest of the three birds. The tail/wing ratio averages about 73. The iris is brown (confirmed by J. G. Williams *in litt.*). The female has dull streaky upper parts, pale yellow underparts, upper mandible black and lower horn-yellow.

(2) *P.s.aureoflavus.* In the male the whole head and upper breast are washed with chestnut. The back, edges of the remiges and practically the whole of the rectrices are yellow, very slightly greenish, but with less admixture of melanin than either of the two other birds in question. The tail/wing ratio is below 65. The female is much yellower (less melanin) throughout than either of the other two species and has beak brownish horn. The iris is red, not brown as in the other two species (*cf.* J. G. Williams *in litt.*).

(3) *P.bojeri.* The male has the yellow of the plumage redder throughout than the other two birds. The head is almost orange, and its bristly feathers have an especially brilliant gloss. The throat is also tinged orange and is bordered with a "bridle", somewhat as in *castaneiceps* but usually more intense and better defined. The iris-colour, tail/wing ratio and the female are as in *castaneiceps*, but the beak is shorter.

It will be seen that of these three birds *aureoflavus* is the most distinctive and that *castaneiceps* and *bojeri* are more alike—in fact to such an extent that if they were not sympatric they could hardly be accepted as separate species. Some confusion has indeed been caused by the fact that the coloured plates of the three birds (heads) in the "Catalogue of Birds" (1890) are so much alike and that the representation of *castaneiceps* there differs so much from that in Mackworth-Praed & Grant, for they show respectively (1) a uniform brownish-golden top to the head and (2) a yellow crown and forehead contrasting with a chestnut occiput. The difficulty is not helped by the fact that the types of *bojeri* (lent from Berlin Museum) and of *castaneiceps* are both bad specimens and are much more alike than any two of the male birds briefly described above. In plumage the two type-specimens hardly differ except that *castaneiceps* has the back and edges to the wings slightly darker and greener and the throat yellower and less golden-brown. However, I think the types can be accepted as representing two species, and disturbance of names thus be avoided, for the following reasons.

According to Dr. Stresemann (*in litt.*) the type of *bojeri* has long been exposed to light in the gallery of the Berlin Museum and in his opinion may originally have had its head of the brilliant, glossy almost orange hue cited for *bojeri* above. The type of *castaneiceps* has been idealized in the plate in the "Catalogue of Birds". It is much ruffled but appears to have had a fairly uniform chestnut extending from occiput to forehead. Thus it differs in the most prominent character, the contrast between chestnut occiput and yellow forepart of the head, as conceived for this species by Mackworth-Praed & Grant. However, thanks to loans by the Museums in Berlin, Chicago and New York I have, with the B.M. collection been able to assemble 24 males which show that, without modification of other *castaneiceps* characters the heads show a range of colour from the contrasting yellow in front–chestnut on the occiput figured by Mackworth-Praed & Grant, to almost uniform golden brown.

There is one anomalous specimen that I am unable to allocate, A.M.N.H. 202875 from Kipini at the mouth of the Tana. It is smaller than *castaneiceps*, 74 against 75–(78)–82, and short-tailed, tail/wing ratio 69 against about 73, and it has the short beak of *bojeri*, not *castaneiceps*; moreover it has a narrower and smaller first primary than any of the three named birds, only about 30% of wing-length instead of about 35. On the other hand the back, remiges and rectrices are dark, agreeing with *castaneiceps* and it has a strong chestnut "bridle", yet the top of the head is fairly uniform golden brown.

The sympatry of the three species is remarkable. *P.s.aureoflavus* ranges from about the foot of Mt. Kenya and Malindi on the Kenya coast southwards through Tanganyika and inland about as far as the foot of Kilimanjaro and Kilosa. *P.bojeri* extends from southern Somalia southwards through Kenya, also inland to the foot of Mt. Kenya (A. L. Rand *in litt.*, H. Friedmann *in litt.*) and Taveta. (Mackworth-Praed & Grant (1955) bring the species into Tanganyika, but I cannot find the basis for this.) *P.castaneiceps* has an extraordinarily restricted range close to the Kenya–Tanganyika border, in Kenya at Taveta and on the coast up to about Mombasa, in Tanganyika from Mkomasi past the foot of Kilimanjaro to about Arusha. Mackworth-Praed & Grant extend the range north to Tsavo in Kenya and south to Morogoro, Kilosa and Ifakara about the Tanganyika Central Line. These extensions I have been unable to verify and J. G. Williams' evidence is also against the statement that *castaneiceps* is "a common waterside weaver in most of coastal East Africa". Incidentally, the specimen reported by Friedmann & Loveridge 'Bull. Mus. Comp. Zool.' 81 (1937): 358 as a female *castaneiceps* from Morogoro is an *aureoflavus*—specimen lent by M. C. Z. Harvard. Further, Dr. E. Stresemann (*in litt.*) believes that the list of localities in Tanganyika given for *bojeri* from Fischer in Reichenow (1904) is due to some mistake and should be ignored.

It will be observed from the foregoing that the range of *bojeri* is entirely contained in that of *aureoflavus* and that of *castaneiceps* in *aureoflavus* except around Arusha, where *castaneiceps* seems to be the only "golden weaver", *cf.* H. F. I. Elliott and Fuggles-Couchman *in litt.* All three occur around Taveta and on the Kenya coast south of Mombasa. Information about the habitats etc. is not very satisfactory owing to confusion between the three species in the past. However, it appears that *aureoflavus* forms nesting colonies in both trees and reeds (*cf.* personal experience), *bojeri* usually in palms, sometimes in bushes, and not necessarily near water (J. G. Williams *in litt.*), and *castaneiceps* only in swamps (*cf.* N. R. Fuggles-Couchman *in litt.*) A comparison of their nesting and feeding habits is very desirable. The differences between *castaneiceps* and *aureoflavus*, nesting in the same reed-bed, were described by Moreau & Moreau ('Ibis' 1937: 338–342) but unfortunately, through following a wrong identification given to them for specimens collected, they increased confusion by recording the *castaniceps* particulars under the name *bojeri.*

Anaplectes rubriceps

The type-locality was restricted to Mohapoani, Witfontein Mountains, Western Transvaal, by Gyldenstolpe ('Ibis' 1935: 292) and Chapin (1954) located this at 24° 55′ S., 27° 15′ E., well inside the Transvaal, north-east of Rustenberg. This may be accepted (*cf.* R. Liversidge *in litt.*), *pace* Smithers *et. al.* (1957) and McLachlan & Liversidge (1958), who place it in Bechuanaland.

South African male birds range 80–85 mm. in wing (Roberts, 'J. S. Afr. Orn. Un.' 1912: 38), Mozambique birds 78–81, Central Tanganyika (coastal) birds 74, 75, 77, 78, 81, the series on which Grote based his *microptera.* Evidently, there is a cline of diminishing size from South Africa into the tropics, but the name *microptera* cannot be maintained on present evidence.

The subspecies *gurneyi* was recently recognized by the South African Ornithological Society Check List Committee ('Ostrich' 1956, 27: 183). They cite Chapin (1954) as ''proposing'' the name, but in fact he wrote ''not a satisfactory race; the range is long and narrow. More likely it is composed of hybrids'' (between the northern *leuconotus* and the southern *rubriceps*). I understand from P. A. Clancey, the secretary of the Committee, that they had no special material and that they are likely to acquiesce in sinking the name *gurneyi* into synonymy.

Quelea cardinalis pallida.

Described by Friedmann from northern Kenya, this is, I understand from J. G. Williams, not tenable on the basis of the material in the Coryndon Museum, Nairobi.

Anomaloszpia imberbis.

The geographical variation of this species is so dim and controversial that it is best treated binomially. Van Someren (1922) found that he could not support the subspecies *rendalli*, *macmillani* and *butleri.* Mackworth-Praed & Grant ('Ibis' 1948; 322) made the last two synonyms of the nominate (Abyssinia to Congo and Tanganyika) with wing-length 64–73—63–73 in Mackworth-Praed & Grant (1955); but they retained *rendalli*, Nyasaland to Damaraland and P.E.A., as slightly yellower in fresh dress of the male (wing 64-73). They made *A.i.nyasae* Benson 1938 a synonym of *rendalli.* They also admitted *tibatiensis* of West Africa on size; this was described on three specimens given as measuring 62–65, but the only males Mackworth-Praed & Grant saw measured 65 and 66. Thus the overlap in size is such that the name *tibatensis* is inadmissible, though it is highly probable that West African birds average smallest.

By contrast with Mackworth-Praed & Grant, Chapin (1954) could find no differences in yellowness. He sank *rendalli* in the nominate; Smithers *et al.* in their Southern Rhodesian Check-List (1957), McLachlan &

Liversidge in their South African book (1958) and Benson & White in their Northern Rhodesian check-list (1957) agree, the latter by implication sinking also *A.i.makandakundae* White 1946. Chapin is, however, inclined to maintain *butleri*, which he would extend over West Africa (i.e. the supposed range of *tibatiensis*), though he thinks *macmillani* ''differs but little'' from the nominate.

The gender of the generic name Euplectes.

Sclater (1930) treated *Euplectes* as feminine; Chapin (1954) and most nineteenth-century authors treated it as masculine. By a decision of the I.C.Z.N. names of Greek derivation that have the termination ''es'' are all to be treated as masculine. (Dr. E. Mayr *in litt.*).

Euplectes hordeaceus sylvaticus.

This was maintained by Chapin (1954) with the admission that individual variation is high and the range of *sylvaticus* is ''none too clear''. Dr. H. Schouteden (*in litt.*) tells me that he recognizes this form with reluctance. It is obviously an unsatisfactory one and I agree with Mackworth-Praed & Grant (1955) in synonymizing it with nominate *hordeaceus.*

Euplectes zavattarii.

Through the kindness of Dr. E. Moltoni I have been able to examine the type. It is in very odd plumage, with many reddish black-tipped feathers that give it an untidy speckled appearance (as in ''*rufigula*'' mutants of *nigroventris*); and it seems extremely improbable that a separate species is represented. If it is a mutant it seems that it can only be of *E.p.pusilla* (as concluded by Mackworth-Praed & Grant), a bird with which *zavattarii* agrees in size and proportions. It must, however, be admitted that if this is so the changes are of an unexpected kind, for *zavattarii* has red in the centre of the crown, which is black in *E.o.pusilla*, and has mainly black covering those areas of the foreparts which are red in *pusilla.*

Euplectes afer niassensis.

This was based on a single female, which was destroyed in Dresden Museum in 1945 (Prof. E. Stresemann *in litt.*). No other specimens are available from anywhere near the type-locality and the name is retained provisionally.

Euplectes albonotatus abyssinicus.

This was doubted by Sclater (1930) and ignored by Mackworth-Praed & Grant (1955) but definitely rejected by Friedmann (1930), with whom I agree.

Euplectes (*Urobrachya*) *axillaris.*

I follow Serle ('Ibis' 1950: 634) in regarding *E.a.batesi* as a synonym of *E.a.bocagei.*

Sclater (1930) tentatively synonymized *E.a.neumanni* with *E.a.phoeniceus.* Mackworth-Praed & Grant (1955) tacitly treat it as a synonym. Dr. Stresemann has kindly sent on loan the series on which Neunzig described *neumanni* and Sclater's opinion is found to be correct. Neunzig was justified in pointing out that birds from the interior of Tanganyika (Kilimanjaro—L. Victoria) have smaller beaks than those of the coast (*zanzibaricus*) but he should also have compared his series with *phoeniceus.* Beaks of 7 males from the interior measure 16.5–17.5 mm. long by 11–12 mm. deep, compared with 18–20 mm. long by 13–14 mm. deep (9 specimens) from the coast Mombasa—Dar es Salaam. Wing-lengths of both series are nearly all 85–91 mm. Hence there is an interesting reduction in proportionate beak-size from the coast inland.

Euplectes (*Coliuspasser*) *ardens*.

Bannerman (1949) has verified the record as far west as Senegal but the species has still not been recorded in the Gambia (E. M. Cawkell, *in litt.* 1958).

References:—
Amadon, D. 1953. Avian systematics and evolution in the Gulf of Guinea. Bull. Amer. Mus. Nat. Hist. 100 (3).
Bannerman, D. A. 1949. The birds of tropical West Africa 7. London.
Benson, C. W & White, C. M. N. 1957. Check List of the Birds of Northern Rhodesia. Lusaka.
Cave, F. O. & Macdonald, J. D. 1955. Birds of the Sudan. Edinburgh & London.
Chapin, J. P. 1954. Birds of the Belgian Congo 4. Bull. Amer. Mus. Nat. Hist. 75B.
Mackworth-Praed, C. W. & Grant, C.H.B. 1955. The birds of eastern Africa 2. London.
McLachlan, G. & Liversidge, R. 1958. Roberts' Birds of South Africa.
Moreau, R. E. in press. Conspectus and classification of the Ploceine weaver-birds. Ibis.
Reichenow, A. 1904. Die Vögel Afrikas 3. Neudamm.
Schouteden, H. 1958. De Vogels van Belgisch Congo en van Ruanda-Urundi. Ann. Mus. Roy. Congo Belge C. Zool. (4) 5 (2).
Sclater, W. L. 1930. Systema Avium Aethiopicarum 2. London.
Smithers, R. H. N., Irwin, M. P. S. & Paterson, M. L. 1957. A Check List of the Birds of Southern Rhodesia. Rhodesian Orn. Soc.
Someren, V. G. L. van. 1932. Notes on the birds of East Africa. Nov. Zool. 32: 292–280.

The Limits of the Genus *Mirafra*

by MR. C. M. N. WHITE

Received 13th June, 1959

Uncertainty on the limits of the genus *Mirafra* has already been expressed (cf.Meinertzhagen, 1951, P.Z.S. and White, 1952, Ibis). In preparing a Check List of the *Alaudidae* of the Ethiopian region, it is necessary to reach some decision upon the point of view adopted.

The type of *Mirafra* is *M.javanica*, represented on the mainland of Africa by three forms. Closely allied to it are *M.cheniana* and *M.albicauda*. These are all rather small larks with wings falling between about 74 and 85 mm.; wing/tail ratios in the African *javanica* forms are about 64–66, in *cheniana* about 60 and in *albicauda* 57. The first primary in all, although well developed, is smaller than many other *Mirafra* species (19–22% of the wing). Rufous on the primaries is rather slight and limited to outer margins and the basal part of the inner web. All exhibit rather drab streaky uppersides, plain secondaries, no distinctively coloured cap, and white outer tail feathers. They form a homogeneous group.

Other larks always placed in *Mirafra* exhibit some marked divergences from them. Among the more striking species or groups of species may be noted:—

M.poecilosterna and *M.gilletti*: these are long tailed, ratios 70 and 73% of wing, and have plain dark wings without rufous edges or areas, dark tails, and slender, pipit-like bills.

M.africana and *hyperythra:* large larks with wings 87–125 mm.; extensive rufous areas on the primaries; generally a rufous cap; longer first primaries 29–30% of wing; wing/tail ratios 54–65. Some white on outer tail feathers.

Proportions provide little help in arranging the species usually included in the genus. *M.angolensis* is very short tailed, index 55, as also nominate *sabota* (w/t index 56), and *M. albicauda* (w/t index 57); others are very long tailed, e.g. *cordofanica* (w/t index 73) and *gilletti* (73). *M.rufocinnamomea*, owing to its rather short rounded wings has a high w/t index, 65–70 in various populations. Other species lie between these extremes.

The ratio of first primary is likewise a variable feature; *albicauda* and *marginata* 20% of wing, *poecilosterna* 22%, *apiata* 25%, *africana* 29%, *angolensis*, *gilletti*, *sabota* 30%, *rufocinnamomea* 37%. Whatever the reason for these variations in the proportion of first primaries to wing length, they do not provide a basis for arranging species in any order of relationship or similarity.

Certain characteristics of pattern also prove most unsatisfactory. Some species of *Mirafra* have extensive areas of rufous on the primaries, others none at all. This varies between closely related birds; thus in the Clapper larks, the *apiata* forms of the south west Cape have hardly any rufous on the primaries in comparison with *hewitti* and allies which have a broad band across the whole primaries and *rufocinnamomea* which has a partial cross band of rufous. The presence of much or little or no white on the tail seems equally unsatisfactory, varying degrees of white from extensive (*marginata*, *albicauda*, *angolensis*) to none (*poecilosterna* and *gilletti*) being found.

Ethological characters merely serve to define well marked species characters, such as the wing snapping of *apiata* and *rufocinnamomea*, large size and terrestrial habits of *africana* and *hyperythra*, slender build and arboreal habit of *poecilosterna*.

I can only conclude that any attempt to use any of these characters to subdivide the African larks ascribed to *Mirafra* would result in the recognition of a number of almost monotypic genera.

If any subdivision of *Mirafra* is resisted, it becomes quite impossible to recognise the genus *Certhilauda* for its three African species. *C.albescens* in fact cannot be separated from *Mirafra* on any criterion; its bill resembles many *Mirafra*, its dark wing and tail is paralleled, the long tail (70% of wing) and long first primary (30% of wing) fall within the range of *Mirafra*.

C.curvirostris and *C.albofasciata* both have long curved bills adapted to digging, but no close resemblances inter se in any other respect. Long digging bills reccur in a number of otherwise unrelated larks e.g. *Alaemon* which is closely related to *Ammomanes*, *Pseudalaemon* which is closely related to *Calandrella*, *Chersophilus* which is not far from *Alauda* and *Galerida*. Since environment results in a number of lark species living together, it is not surprising to find some adaptive radiation in bill form between possibly competing species. No great weight can therefore be given to the long bills of *curvirostris* and *albofasciata* which are remarkably dissimilar in other respects. Thus *curvirostris* is long tailed, tail 72% of wing, *albofasciata* short tailed, 60% of wing. Both have fairly long first primaries 34–35% of wing. In *curvirostris* wing and tail are dark; *albofasciata* has a unique tail pattern with white tips, recalling *Melanocorypha calandra*, and patterned secondaries like those of *M.rufocinnamomea*. The spiralling and whistling courtship of *curvirostris* is repeated in other larks such as *Alaemon*, and is in no way a more remarkable feature than the wing snapping of the Clapper lark group of *Mirafra*.

It seems quite likely that *albescens* and *curvirostris* are closely allied sympatric species, differing mainly in size and bill length. Since *albescens* is inseparable from *Mirafra*, this is an obvious ground for uniting *curvirostris* with other *Mirafra* rather than for recognising *Certhilauda*, and forcing the otherwise Mirafrine *albescens* into it. If the aberrant characters of *albofasciata* are enough to justify placing it in a monotypic genus, the same could be said for several other *Mirafra* species.

If these are insufficient grounds for doubting the value of separation of *Mirafra* and *Certhilauda*, there remains the ambiguous position of *Heterocorys chuana*, placed by Meinertzhagen in *Certhilauda* and by myself in *Mirafra*. Pattern here presents many resemblances to *M.africana* on the upperside, but the wings lack any rufous area and the tail is dark. There is no contrasting cap in *chuana* but the cap is suppressed in some forms of *africana* and *hyperythra*. The tail of chuana is long (71% of wing); the bill is rather slender, and especially in females somewhat curved, and can be matched by some *albofasciata*. According to Roberts *chuana* closely resembles *africana* in the field.

Only two courses seem open: a number of largely monotypic genera might be recognised based upon what are no more than good species characters. Alternately all these Ethiopian larks may be treated as a homogeneous group which has developed by adaptive radiation to fill various niches in the environment, providing examples of highly terrestrial and highly arboreal species with links between them, and bills adapted for digging, seed eating or gleaning surface food and insects. Presumably similar adaptive radiation is exhibited in the diversity of w/t proportions, and length of first primaries, and in pattern contrasts such as presence or absence of rufous on the primaries or of white in the tail, although the precise significance of these variations cannot be explained as long as so little field data on their roles in behaviour is available.

On reviewing the evidence I see no reason to maintain as distinct from each other the genera *Certhilauda*, *Mirafra*, *Heterocorys*, *Heteromirafra* and *Pinarocorys* or any of the other divisions of *Mirafra* less often recognised.

It is noteworthy that a parallel situation exists in another group of larks inhabiting the desert belt from northern Africa to north western India. The short billed and small *Ammomanes* and the larger and long billed *Alaemon* are evidently very closely allied. Verheyen (Alauda 1958) has indeed remarked that he could find no anatomical differences between them. None of the writers who have commented on the close relationship between *Ammomanes* and *Alaemon* have mentioned *Alaemon hamertoni* of Somaliland. This last bird was indeed made conspecific with *A.alaudipes* by Meinertzhagen but although related, is almost as different from it as any pair of related larks could be, and in many ways an intermediate between *Ammomanes* and *Alaemon.A.hamertoni* is longer billed, longer winged and longer tailed than *Ammomanes*, but is more like *Ammomanes* in colour, and lacks the extensive white found on the wing of *alaudipes*. If *Ammomanes* and *Alaemon alaudipes* did not exist to point to its affinities, one might indeed regard *hamertoni* as another specialised *Mirafra* allied to *M.poecilosterna* in general proportions and facies, but adapted to desert ground colour. In short *Ammomanes* and *Alaemon* exhibit the same type of adaptive radiation as is found in *Mirafra*, and since it is known that anatomically they are so alike, the argument for treating them as single genus is strong.

I do not intend to intrude here into the genera of Palaearctic larks beyond pointing out that if the arguments put forward for Ethiopian larks are followed, it is probable that *Alauda*, *Lullula*, *Galerida* and *Chersophilus* would likewise have to be united in a single genus. *Lullula* and *Chersophilus* are monotypic, *Alauda* is a superspecies of two allied but slightly overlapping species. Verheyen was unable to find anatomical differences between *Alauda* and *Galerida*, although he found slight differences to justify *Lullula* and *Chersophilus*. These four Palaearctic genera are of course used for certain larks with well known distinctive characteristics in the areas where they occur, and their separation and use has in a sense become hallowed with time. On behavioural characters *Alauda* and *Galerida* are easily separable. Nevertheless if long established usage is in fact one of the reasons for continuing to accept monotypic or almost monotypic genera of European larks, which in certain respects are closely alike, it should be recognised that it is only unfamiliarity which has prevented a similar treatment being accorded to many African larks. Taxonomic treatment of genera of larks is at present inconsistent in the Palaearctic and Ethiopian regions.

Geographical Variation in the South African Populations of the Red-Eyed Bulbul *Pycnonotus nigricans* (Vieillot)

by Mr. P. A. Clancey

Received 3rd May, 1959

The Red-eyed Bulbul *Pycnonotus nigricans* (Vieillot) is a species of the dry west and interior districts of the South African sub-continent and south-western Angola. The populations are generally conceded as showing little in the nature of demonstrable geographical variation, and in South Africa only the nominate race has at any time been recognised by specialists. The Angola populations of this bulbul have, since 1918, been credited with the name *P.n.harterti* Zedlitz, 1916: Huila, southern Angola, but as has been shown by Gyldenstolpe (1924), Roberts (1935), and more recently by Rand, *Fieldiana*, Zoology, vol. 35, 6, 1958, p. 147, Zedlitz (*vide Journal für Ornithologie*, vol. lxiv, 1916, p. 71) gave this name to the southern Angola populations of *Pycnonotus barbatus* (Desfontaine) and not those of *P.nigricans*. Rand (p.153) also shows that *P.b.harterti* is not distinguishable from *P.b.tricolor* (Hartlaub), 1862: Angola, of which race it is now placed as a synonym, and *P.nigricans* is currently treated as a monotypic species.

Roberts, *Annals of the Transvaal Museum*, vol. xvi, 1, 1935, p. 130, records that no subspecific differences are to be observed between specimens in the Transvaal Museum collection from the Bechuanaland Protectorate, South-West Africa, central and eastern Cape Province and the Transvaal. Macdonald and Hall, *Annals of the Transvaal Museum*, vol. xxiii, 1, 1957, p. 23, state "No geographical variation has been noted in this bulbul, but the series from the Kaokoveld (north-western South-West Africa) stands out as being greyer above than others in the British Museum. This may prove to be a good racial character, but it is apparent that there is not only seasonal change, old plumage being browner than fresh, but also a tendency for old skins to 'fox'. In the absence of any material truly comparable with these newly collected specimens in fresh plumage it seems unwise to give them a name.'' Irwin, *Occ. Papers Nat. Mus. Southern Rhodesia*, No. 22B, 1958, pp. 198–201, in dealing with the relationship between *P.nigricans and P.barbatus* in the Bechuanaland Protectorate, draws attention (p. 199) to colour variation in the Bechuanaland populations of *P. nigricans* as follows: ''It should be noted, however, that the *nigricans* populations living in northern Bechuanaland are not identical to those inhabiting the central and southern Kalahari, which are at once distinguished by having the mantle a colder stone brown, the throat blackish brown, upper breast feathers dark brown tipped with off-white and extending further down on the abdomen and flanks and giving the effect of striations.'' Study of the good series of recently collected specimens in the collections of the East London and Durban Museums, augmented by additional loan material from the Transvaal Museum, Pretoria, and the National Museum of Southern Rhodesia, Bulawayo—just over ninety skins in all—shows that the populations of *P.nigricans* in the South African sub-continent are not lacking in geographical variation, as already demonstrated in part by Macdonald, Hall and Irwin, but suggests that only two groups of populations are sufficiently well characterized as to merit recognition by name. While most of my material has been collected during the past ten years, I find the dangers presented by 'foxing' to be less troublesome than the marked plumage colour changes effected by wear and actinic action.

Turdus nigricans Vieillot, 1818, based on ''Le Brunoir'' of Levaillant, has recently had its type-locality restricted to Goodhouse, on the lower Orange River, by Macdonald, *Contribution to the Ornithology of Western South Africa*, 1957, p. 116, who based his conclusions on the known route followed by Levaillant on his journey to Great Namaqualand. Of the topotypical populations I have before me specimens in fresh dress from Brandkàros and Kuboos, near Alexander Bay, at the mouth of the Orange River, and others in lightly worn dress from Kenhardt, the wings and tails of which measure: ♂♂ 96–101, 83–85, ♀ 95, 80 mm. Macdonald, *loc.cit.*, gives similar measurements for additional topotypical material collected at Grootderm and Violl's Drift, localities on the lower Orange, by the British Museum Expedition of 1949–1950. Specimens from Okahandja, Swakopmund and the Erongo Mountains, South-West Africa, agree closely with those of the lower Orange River and north-western Cape Province (Kenhardt), but six specimens from the Kaokoveld (Kaoko Otavi, Sesfontein, Warmquelle and Orupembe) average lighter and greyer on the upper-parts in series. These latter specimens are part of the series commented on by Macdonald and Hall, *loc.cit.* Not all the Kaokoveld birds are to be separated from those from further south in South-West Africa, and some of the apparent pallor is certainly occasioned by protraction in the moult of the dorsal plumage, which has resulted in sun-bleached feathers being interspersed with the slightly darker fresh ones. However, two females from Kaoko Otavi and Orupembe are admittedly exceptionally pale. These pale Kaokoveld birds either represent intergrading populations or the actual austral outliers of a pale unnamed race of the arid littoral of south-western Angola. Macdonald, *loc.cit.*, in a later (as published) paper has stated that "there does not appear to be any geographical variation throughout South West Africa," but this observation would not appear to be strictly correct in the light of the known tendency to pallor in the Kaokoveld populations.

In addition to the South-West African populations just dealt with, other populations agreeing with the topotypical ones occur in northern, central and western Bechuanaland, and throughout most of the northern Cape Province, but in the eastern districts of the northern Cape (Vaal and Harts Rivers), south-eastern Bechuanaland Protectorate and western Transvaal (east to Pretoria) rather different populations are to be found. In series such birds are darker and browner, less inclined to grey dorsally, and on the under-parts they are rather browner on the lower throat, less grey, and have the lower breast more markedly streaked than in the populations occurring to the west and north-west. There is no difference in size. These differences have already been recorded by Irwin, *loc.cit.* Such rather dark coloured birds are now known to be intermediate between the pale greyish *P.n.nigricans* with much white over the median ventral surface, and a significantly darker and mensurally larger group of populations centred on the south-eastern highlands, and occurring in the eastern Cape Province, Orange Free State, Basutoland and the Transvaal highveld. Compared with topotypical *P.n.nigricans*, specimens of the eastern populations are distinctly darker and browner on the upper-parts, while on the ventral surface they show a marked reduction in the quality and extent of white over the lower breast and abdomen, as a result of the pronounced downward extension of the pectoral streaking and the strong suffusion of brown on the sides of the body and flanks. There is also a diagnostic difference in tail-length: north-western Cape (topotypical *P.n.nigricans*) and South-West African ♂♂ 80–85, as against 85.5–96 mm. in the eastern populations. The larger overall size of the eastern birds is also revealed in the average greater wing-length and increase in bill mass: wings of *P.n.nigricans* 94.5–101, as against 98–109 mm., culmens 18.5–21, as against 21–22 mm. It seems to be necessary to give formal recognition to these important structural and colour differences in the populations of *P.nigricans*, and I propose to recognise two races of this bulbul from within South African sub-continental limits. Further work may well show that the south-western Angola populations are sufficiently pale on the upper-parts as to warrant them being given a name, in which case the northern Kaokoveld birds will doubtless require to be associated with the new taxon. In the meantime, a name is required for the eastern populations, and *P.n.superior* mihi, subsp. nov., is introduced accordingly below.

Irwin, *loc.cit.*, in his important study of the relationship between *P. nigricans* and *P.barbatus* advances minor preferences in ecological requirements as the essential barriers segregating the two forms, which occur apparently sympatrically in parts of the featureless country of northern and eastern Bechuanaland, and are now recorded as hybridizing to a limited degree in that area. It is generally believed that *P.nigricans* is an inhabitant of drier country than any of the *P.barbatus* complex of forms, but such arguments as are advanced by Irwin lose much of their cogency and value when it is appreciated that *P.n.superior* has its distribution centred in a region which enjoys a relatively higher rainfall than the country tenanted by most of the populations of the *P.barbatus* races of southern Africa. It would be interesting to know if *P.n.superior* actually hybridizes with the two contiguous *P.barbatus* forms, *P.b.layardi* Gurney and *P.b.tenebrior* Clancey, because it is known to occur alongside the latter race in the high country (above 5,000 ft. a.s.l.) of East Griqualand, eastern Cape Province. In East Griqualand *P.nigricans* and *P.barbatus* do not appear to hybridize, and it has been reported to me from Matatiele that in some years *P.nigricans* is the only form observed, and in others *P.barbatus*. This is precisely what one would expect in a marginal area where two such closely related competing forms are in contact.

In the species *P.nigricans* it is proposed to recognise two geographical races at the present time, and the nomenclature characters and ranges of these taxa are as follows:

(a) *Pycnonotus nigricans nigricans* (Vieillot)

Turdus nigricans Vieillot, *Nouveau Dictionnaire d'Histoire Naturelle*, New Edition, vol. xx, 1818, p. 253: Orange River, Namaqualand. Type-locality restricted to Goodhouse, north-western Cape Province, by Macdonald, *Contribution to the Ornithology of Western South Africa*, 1957, p. 116.

Head-top, face, malar surfaces, chin and upper throat coal-black; rest of upper-parts Buffy Brown/Olive-Brown (*vide* Ridgway, *Color Standards and Color Nomenclature*, 1912, pl. xl). On under-parts, lower throat and breast about Fuscous (pl. xlvi), the feathers tipped with off-white, some of the fuscous extend downwards over the white lower breast in the form of striae; abdomen also white, and flanks white washed with pale brown; under tail-coverts chrome yellow.

Measurements: 12 ♂♂ wings (flattened) 94.5–101 (97.6), culmens from base 18.5–21 (19.8), tails 80–85 (82.3), 12 ♀♀ 88–85 (91.6), 17.5–20 (19.3), 75–82 (77.7) mm.

Material examined: 60. (North-western Cape Province, 5; northern Cape Province, 25; South-West Africa, 10; Bechuanaland Protectorate, 17; western Transvaal, 3).

Type: None. Based on "Le Brunoir" of Levaillant, *Histoire Naturelle des Oiseaux d'Afrique*, vol. iii, 1802, p. 38, pl. 106, fig. 1.

Range: North-western Cape (mainly centred on the Orange River, but occurring south of the river in places, *e.g.*, to the Kenhardt district), northern Cape Province (eastern populations intermediate in colouration towards *P.n.superior*), South-West Africa (Kaokoveld populations apparently inclining towards an unnamed south-western Angola race), Bechuanaland Protectorate (south-eastern populations near *P.n.superior* in dorsal colouration), western Transvaal (*P.n.nigricans* ⪆ *P.n.superior*).

Remarks: Roberts, *loc.cit.*, gives measurements from the large Bechuanaland series collected on the Vernay-Lang Kalahari Expedition of 1930, which agree closely with those given above: 11 ♂♂ wings 96–98, tails 78–84, 8 ♀♀ 89–95, 75–81 mm. Macdonald, *loc.cit.*, gives still further measurements which support my observations: 3 ♂♂ wings 96–101, tails 81–85, 3 ♀♀ 90–93, 77–82 mm. All specimens from the lower Orange River (topotypical) and South-West Africa.

(b) *Pycnonotus nigricans superior*, subsp. nov.

Type: ♂, first winter. Mamathe's, near Teyateyaneng, north-western Basutoland. Altitude c.5,700 ft. a.s.l. 12th March, 1956. Collected by M. O. E. Baddeley. In the collection of the Durban Museum.

Diagnosis: Differs from *P.n.nigricans* as defined above by being distinctly darker and browner, less grey, on the mantle and rump (about Olive-Brown (pl. xl)). On the under-parts darker and browner over the lower throat and breast; pectoral streaking more fully developed and distributed downward than in *P.n.nigricans*, and sides of body and flanks more heavily washed with brown, resulting in a marked reduction in the amount of white shown over the median ventral surface. White of under-parts also duller. Wings and tail darker. Structurally larger, this especially marked in the substantially longer tail (av. 89.0 in ♂♂, as against av. 82.3 mm. in the nominotypical race).

Measurements: 12 ♂♂ wings 98–109 (100.5), culmens 20–22 (21.1), tails 85.5–96 (89.0), 12 ♀♀ 92–101 (95.8), 19–22 (20.8), 82–88 (83.6) mm.

Material examined: 33. (Central Cape Province, 3; eastern Cape, 15; East Griqualand (Matatiele), 5; Orange Free State (Glen, Excelsior), 4; Basutoland (Mamathe's), 5; Transvaal highveld (Potchefstroom), 1).

Measurements of the Type: Wing 100, culmen 21, tail 88 mm.

Range: Eastern Karoo districts and eastern Cape Province, north-eastwards to Griqualand East/Natal border, Basutoland, Orange Free State and Transvaal highveld. In the winter ranging to the eastern Transvaal (Lydenburg (Ayres)) and Natal and Zululand (Ngoye Forest, near Eshowe (R. B. and J. D. S. Woodward)).

Remarks: The measurements of the five paratypes from Mamathe's are interesting: 2 ♂♂ wings 100, 109, tails 88, 96, 3 ♀♀ 96, 97.5, 101; 82.5 (worn), 85, 88 mm.

ADDENDUM

Since the above was written a further collection of South-West African specimens of *P.n.nigricans* has become available for study. During the course of a recent trip (May–June, 1959) to South-West Africa a series of 16 specimens was taken at the following localities: Windhoek (7), Okahandja (5), Otjiwarongo (3) and Keetmanshoop (1). This material gives the following critical measurements, which agree intimately with those already recorded above for the western populations of this bulbul: 6 ♂♂ wings 92–98 (95.0), culmens 18–21 (19.4), tails 78–82 (80.2). 7 ♀♀ 87.5–93 (90.0.), 19.5–20 (19.1), 75–82 (78.8.) mm. Two specimens retain juvenal flight and tail feathers, and are unsuitable for measurement, while the single adult male from Keetmanshoop is large-sized, as in *P.n.superior* (wing 103.5, tail 96.5 mm.), but like the nominate race in colour. It is so unlike all other South-West African birds in size that it may well be a migrant from an eastern area of contact between the two forms. The diagnostic plumage colour characters of the nominotypical race as defined in the above article are entirely substantiated by this additional series of freshly moulted birds.

4 DEC 1959

BACK NUMBERS OF THE "BULLETIN"

Back numbers of the "Bulletin" can be obtained at 3/– each. Applications should be made to R. A. H. Coombes, Esq., Zoological Museum, Tring, Herts. No reply will be sent if parts are not available.

Members who have back numbers of the "Bulletin" which they no longer require, are requested to kindly send them to R. A. H. Coombes, Esq., as above.

DINNERS AND MEETINGS FOR 1959-60

15th December, 19th January, 16th February, March, with the B.O.U.*, 19th April, 17th May, 20th September, 18th October, 15th November and 20th December.

*As usual, the March meeting is joint with the B.O.U. and the date will be decided by them.

FREE COPIES

Contributors who desire free copies of the "Bulletin" containing their notes should state so on their MS., otherwise these will not be ordered. These will be supplied up to a maximum of fifty.

PUBLICATION OF THE "BULLETIN"

Members who make a contribution at a Meeting should hand the MS. to the Editor at that Meeting. It is essential that the MS. should be correct and either typed or written very clearly with scientific and place names in block letters. The first mention of a scientific name should be spelt out in full, i.e., genus, specific name, racial name (if any), and author. Any further mention of the same name need only have the initial letter of the genus and no further mention of the author.

If no MS. is handed to the Editor at the Meeting, a note will be inserted mentioning the contribution.

BLACK AND WHITE ILLUSTRATIONS

The Club will pay for a reasonable number of black and white blocks at the discretion of the Editor. If the contributor wishes to have the blocks to keep for his own use afterwards, the Club will not charge for them, as has been done in the past.

Communications are not restricted to members of the British Ornithologists' Club, and contributions particularly on taxonomy and related subjects will be considered from all who care to send them to The Editor, Dr. J. G. Harrison, "Merriewood", St. Botolph's Road, Sevenoaks, Kent.

Communications relating to other matters should be addressed to the Hon. Secretary, N. J. P. Wadley, Esq., 14 Elm Place, London, S.W.7.

SUBSCRIPTION

Thirty Shillings Annually. Three Shillings per copy, payable to the Hon. Treasurer, C. N. Walter, Esq., Finsbury Pavement House, 120 Moorgate, London, E.C.2.

Published by the BRITISH ORNITHOLOGISTS' CLUB and printed by
The Caxton & Holmesdale Press, South Park, Sevenoaks, Kent

1960-61

3/125 cy/10.